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A Few Words on Summer Fallows.

The two principal objects of summer fallowing are, to clean the land, and to convert, by the admission of light and air, and by the comminution of the particles of the soil, its inert matter into available food of plants. In light sandy soils, which admit the air readily at all times,—and in which consequently, there is but little dormant matter capable of speedy decomposition—a fallow is not followed by that increase of crops so observable on rich clay loams, which, without constant working, are impervious to the atmosphere. Farmers in old countries are well satisfied on this point, while with us every year seems to convince multitudes of its truth. We admit that sandy land produces better crops for a few years *when first tilled*, than clay land, and that summer fallowing on such lands is attended with better results for a few years than on heavy loams. But after the organic matter of these light soils is removed—as under a system of summer fallowing it soon will be—the increase of crops from this process is materially lessened. Summer fallowing on sandy soil, is *simply* accelerating the decomposition of organic matter and the disintegration of the mineral elements of plants in the soil, rendering them available, without increasing the quantity. On such soils, therefore, it must be considered an exhausting system of cultivation.

On aluminous soils the case is different. Most clays naturally contain an almost inexhaustible amount of the elements of plants, and the principal aim of the cultivator is to render these elements assimilable. Thorough pulverization enables him to do this to the best advantage; and we may question whether the heavy land farmer will ever be able to dispense altogether with summer fallows.

Clay land possesses the power of retaining the ammonia contained in the rain water which filters through it; while sandy soils possess this power only in a slight degree, if at all. When an underdrained, rich clay soil, is summer fallowed, therefore, not only is the food of plants locked up in it rendered available, but all the ammonia in the rain which falls during the year it is fallow, is retained for the use of the subsequent crop. If the rain which falls on an acre of land in a year contains 50 lbs. of ammonia, a good summer fallow, on such soil as we have supposed, would increase the next wheat crop ten bushels per acre, or in other words, it would supply as much ammonia as 3 cwt. of the best Peruvian guano.

On a sandy soil, especially one which has long been under such a system of tillage, little increase of fertility is gained by the decomposition and disintegration of inert matter—since such soils contain comparatively little inert food for plants—and but a small proportion of the ammonia of rain water is retained. So that, while the heavy land farmer is under the necessity of performing much more heavy work, and of raising fewer crops than his sandy soil neighbor, yet he is not necessitated to use so much manure, and reaps frequently in one crop as much profit as the other does in two. Each class of soils, however, has its advantages and disadvantages, and in Great Britain, since the extensive introduction of turnip culture, the light soils have been more profitable than the heavy soils which need summer fallowing.

Summer fallowing sandy soils is unwise; how, then, should they be cultivated? Sow them to clover, peas, beans, lentils, rape, &c., and either plow in these crops or feed them to cattle or sheep and return the manure. These plants take up the ammonia brought to the soil in rain water, and when plowed in or eaten on the land, the ammonia is retained just as it is on the clays. In this way, clover, &c., is to the light soils what the double silicates are to the clays—the retainer of ammonia for the use of the following wheat crop.

On medium soils—such as abound in Western New-York and Upper Canada—a blending of these two systems would appear judicious. This would be, growing as much clover, &c., as possible, eating a portion of it on the land, and breaking up about the last week in June, simply cultivating and harrowing it afterwards to keep it free of weeds and render it mellow. This

practice is adopted to a great extent in Western New-York, and is found much better and cheaper than several plowings as in the old summer fallow system. Even on heavy clay land many intelligent farmers prefer turning under a crop of clover when in bloom in this way rather than to summer fallow proper. The clover keeps the land light, and the gases generated during its decomposition, serve both to enrich and ameliorate the soil. How far this practice is capable of superseding the old summer fallow, experience only can decide. English experience is against it; but our cold winters and hot summers, and above all the westerly winds which so constantly prevail, and which so astonish Europeans in licking up moisture, render the pulverization of the soil in this country a comparatively easy task, and enable us to dispense with very much of the labor necessary on European, and especially on British farms. And we may here say that such are the differences of climate that we are quite satisfied that no English system of rotation or of tillage is applicable to this country, and that the only advantage to be expected from the experience of our trans-Atlantic cousins—admitting, as we must, that they are are the best farmers in the world—is from studying the *principles* on which their systems are founded; and thus while we may not be able to grow their turnips and vetches, and are not, perhaps, under the necessity of adopting their long or summer fallow, we may build up a system of agriculture adapted to our different circumstances, and yet having for its foundation the same great laws which govern the processes sanctioned by their long experience.

One of the great wants of our system of rotation is a fallow crop. A crop, which, while it impoverishes the soil but little, permits the free use of the cultivator and hoe during summer. A crop that shall be to us what the turnip is to English farmers. A crop in a word, that shall enable us to clean our land as well as though it was summer fallowed, that furnishes a large amount of nutritious food, and which, when consumed on the farm and the manure made from it returned to the soil, shall *leave the land rich* in ammonia for the use of the following cereal crops. Indian corn admirably answers the two first requisites, but we fear it consumes or destroys as much ammonia as wheat, and that, therefore, it is not a true fallow crop. Beans come nearer our requirements than any other crop we are acquainted with, and it is surprising that they are not more extensively grown on all wheat farms.

To Keep Bugs from Vines.

LUTHER TUCKER, Esq.—For the benefit of your numerous subscribers, I will send you what I have found to be the best method to keep the yellow striped bugs from vines. I have used it for more than 30 years, and never have known it to fail.

Take the feathers from a hen's wing, and dip them in spirits of turpentine, and stick one or two in a hill, and after every shower they will want to be dipped over again. HOWARD SAYRE. *East Thetford, Vt.*

Culture of Cabbage and Root Crops.

EDS. CO. GENTLEMAN—I have been hoping for a rainy day for several weeks, that thus an opportunity might be afforded for finishing my statement of modes of cultivation of crops, &c. After the labors of the day I find myself too weary to write evenings, or even to read with much profit. But the rainy day has come at length—a cold rain, but much needed in this region, and it will be of much service, particularly to the grass, which for two weeks has grown but little by reason of the dry cold winds which have prevailed, rendering the surface of the earth very dry and hard.

Cabbages, last year, were next in importance with me to potatoes. Those for early use, I started in the hot-bed. Early York and Ox Heart are the kinds which I prefer. For later cabbages I sowed Early St. Dennis Drum Head, and for winter use Premium Flat Dutch, mixing the seed with carrots, and sowing the middle of May. The ground for early plants, was prepared by plowing in deep a heavy coat of stable manure, and then harrowing in three or four hundred pounds of Guano to the acre. The plants started well, but the little black bug soon destroyed 1000 of them. Ashes and gypsum, sifted on the plants when wet, seemed to check the bug, and probably saved a portion of the plants. Those which were not destroyed, recovered and did well. I did not however perceive any benefit from the Guano, as in places where I did not use it, the crop was quite as good as where it was employed.

My middle crop—Early St. Dennis Drum Head—for some reason which I cannot explain, was an entire failure. I suppose however that the drouth came just in season to ruin them.

For the late cabbages, the ground was so wet that I could not plow it until quite late, and then there was so large a growth of weeds, that I could not plow it well with the manure first spread on. Therefore I plowed a furrow, and then scattered the manure plentifully in this furrow; then another, and so on through the whole, plowing as deep as possible with two horses. In this way I buried at a depth of seven or eight inches a good supply of green stable manure. The result was a fine crop, scarcely one plant in ten failing to produce a good head.

For early cabbages, I put the rows two feet apart, and the plants in the row, from one and a half to two feet. For late ones, the rows were two feet and a half asunder, and the plants in the row two feet. The latter I think were too thick. I shall this year make the rows three feet, and the distance in the rows two feet and a half. I plant with a dibble, and set the plants so deep as to leave nothing but the leaves above ground. This deep planting I find is essential. Ignorance of this one thing makes many long legged, light headed cabbages, as it did nearly all of the few which I attempted to raise formerly.

It is also important to hoe the plants frequently, but it isnot necessary or desirable to "hill them up," as many suppose, when they are properly planted. The

secret of raising good cabbages, after two years experience, I now believe to be, *heavy manuring* (no matter how green the manure,) *deep plowing*, *deep planting*, and *clean culture*.

I started last year with 8000 plants, and wtih a partial failure of the first crop, and an entire failure of the second, raised about 4000 heads. The land occupied was five-eighths of an acre.

Of carrots I raised only four rods. The ground was trenched the previous fall, two feet deep, with the spade, with eight horse cart loads of good compost. In the spring it was again dug with the fork one foot deep, and strawberries planted in rows five feet apart with carrots on beds between. With the seed I sowed superphosphate of lime, 400 lbs. to the acre. I had 40 bushels of very handsome carrots, which is at the rate of 1600 bushels per acre. The result was so good, that I dug last fall in the same way twice the quantity of ground, which should have been ten times as much except for the want of capital. I hope to double the quantity yearly in the future, for several years. I am confident it will pay.

Of sugar beets, I sowed one fourth of an acre, plowin 15 loads of compost, and sowing in drills 2 feet apart, using ashes and plaster in the drill, and cultivating entirely with the hoe. One hundred and twenty bushels was the result. They were sowed too late, by reason of the wet in May, which prevented plowing till about the first of June.

Mangel wurzel are with me a better crop, much easier raised, yielding double the quantity, and being nearly as good for feeding. I sowed of these one-eighth of an acre, in drills three feet apart, using phosphate or lime, having previously manured with eight loads of compost. The seed did not all grow, but I had 125 bushels—or 1000 bushels per acre.

I sowed three kinds of turnips—long white, flat white, and Russia. The first, after peas and potatoes, using compost of hog manure and muck. The second, among pole beans which had nearly failed, using guano and the cultivator. The third, on land which had been plowed twice and well manured, harrowing in phosphate of lime, 200 lbs. to the acre. All were sowed broadcast, during the first two weeks in August. It was very dry, and much of the seed did not come up; of the Russias not more than one-third. There was scarcely any appearance of growth until after the rain, about the middle of September; but I had a good crop in each case. The white flat were very handsome, but heat and rotted badly in the cellar. Whether the guano had any thing to do with this, I am not sure. The Russias were put in at the same time side by side, and kept well. They were fine, noble roots, many of them 6 to 8 inches in diameter, growing mostly after the middle of September—90 bushels on one-eighth of an acre. These turnips keep well through the winter, and are good for the table now. These and mangel wurzel are, in my judgment, the most profitable roots for the farmer to raise for feeding. Carrots I presume, are better for horses and for making butter, but the others can be raised with half the labor, and for making milk and general feeding, they are more than half as valuable. Indeed for making milk I think the mangel wurzel nearly as good as carrots.

For corn fodder I have tried three methods of sowing—broadcast, in drills, and in the furrow, following a small plow, and turning the next furrow over the seed, having plowed deep and manured previously. I like the last mode the best, I get as large a crop as by the drill process, and with less labor.

My letter is becoming so long as, I fear, to weary both you and your readers. I will therefore omit the other vegetables. Permit me, however, to say that I am now plowing with two horses abreast, 10 inches deep, land which I subsoiled two years since, and upon which the foregoing crops were raised, and that I find it evidently improved. I only want plenty of good compost and a plow and team that would do the work of the spade, or capital to employ the spade itself, in order to give me a good soil from one to two feet deep. When this is once done, I shall have no great fear of drouth or "bad luck." My carrots did not suffer in the least last year. But I must stop. J. S. W. *New Britain, Conn., May* 9, 1855.

We thank J. S. W. for the above, as well as for his previous communications to this journal, and we hope he will continue to furnish us with his experiences in farming, as we are sure they will prove profitable to our readers.

Plowing Deep and Shallow.

Messrs. Editors—I have thought that I would give you some of my observations and experiences in farming matters, as I have always lived upon a farm and had the management of one since I was fifteen years old, or for thirty-five years. During that time I have been a constant reader of agricultural papers, and other works upon the same subject. I believe that I have been a subscriber to *The Cultivator* from its commencement until the establishment of your valuable weekly, *The Country Gentleman*, (since which time I have taken that,) and I have derived hundreds of dollars from its information and suggestions to aid my own experience But there is much that I cannot follow, advocated in those papers, for any practical farmer must see that no plan of farming can be written to suit all parts of this state alone, much more this nation. I think a farmer should not only be an experimenter, and an observer, but also a thinker, and should cultivate the same in his children and those in his employ. My mode to make my boys think, is to call attention to facts, and ask their opinions, and to compare opinions together. For example, to observe at time of harvest, the difference produced upon the crops by deep and shallow plowing,—difference of soil, &c.,—and ask, where is the cause?

My farm has much side-hill. Sometimes I plow up and down the hill, sometimes otherwise, and before we used the wheel under the plow-beam, there would be much difference in the depth of the furrows that were made going up and down, the deepest being those that

were plowed going down. The lands were wide enough, (60 to 75 ft.) to divide the field in observable strips alternately plowed at different depths, and at harvest we almost always observed that there would be marked differences in the looks and stand of the grain upon these strips, where soil and all were alike, save the depth it had been plowed. The *best* wheat, oats and corn, were nearly always found where the land was plowed *shallowest*.

This is at variance with the principles laid down and advocated in all agricultural journals, and the man who writes for them must always say—"plow deep, plow *deep*,—the deeper the better."

Now Messrs. Editors, as a practical farmer, and an admirer of *good* farming, I will express my opinion, and allow me to differ from this wholesale notion of *always* plowing deep. I base this different conclusion upon multitudes of *facts*, "and facts are stubborn things."

I have seen twenty bushels of shelled corn more, raised on an acre plowed four inches deep, than on an adjoining acre plowed seven or eight deep. This was in the same field, the soil precisely alike, a coarse sandy gravel with many small stones; and had been tilled alike for 20 or 30 years; it was plowed the same week, the corn of the same kind, planted the same time, and the after cultivation all the same, the *only* difference being in the depth of the previous plowing. The corn was planted in rows about three and one half feet each way, and was plowed twice, and slightly hoed after the first plowing. The first plowing *from* the hills, two furrows between the rows; the second plowing *to* the hills, plowed as deep as possible, using two horses, driven one ahead of the other.

Another case. In 1821, Mr. H., the man who tilled the above piece, came to live with me. I was plowing for corn, in the spring, and had one half the field plowed over six inches deep. He told me it was "*too deep for corn*," and as he was an old man and I a boy, I listened to his advice. He plowed the remainder of the field three to three and a half inches deep. The corn was planted 3½ ft. each way, harrowed twice after it was up; we could not plow it until it was quite large, the sod was so stiff and not rotted. We then plowed it twice from the hill, very deep, hoed it, and then plowed it twice *to* the hills very deep. The first plowing with an old fashioned "bull plow," with the mould-board taken off; the second and third time with a cast iron plow. The soil was all alike, a sandy loam with lime-stone in some places. It was a stiff timothy sod, and had been mowed two years.

The treatment of the whole field was the same, but during the summer which was a dry one, that which grew on the ground deepest plowed was the poorest, looked yellow and sickly, and yielded from 12 to 15 bushels of shelled corn less per acre than that part plowed but half the depth. The average yield of the best half of the field was about 65 bushels of shelled corn per acre. This was in Duchess Co., in this state.

Since that time, 34 years, I have plowed my corn ground shallow, (sometimes but three inches deep,) save strips through fields for experiment, and have found always the same results. I commonly plant a clover sod. I cover it with my unfermented barn-yard manure, plow it under—plant 3½ feet each way, use the cultivator when the corn is small, plow once to the hill, *deep*, sometimes hoe, but not always if there are no weeds, and count an average yield of 50 bushels of shelled corn per acre, oftener more than less.

Those of my neighbors who plow shallow, before planting, and treat as I do, get larger crops than those who plow very deep. I shall have more to say upon this subject. HENRY BREWER. *Enfield, N. Y.*

The writer of the above, is an intelligent, observing and successful farmer—one whose statement of facts may be relied upon. He shows, what we have often endeavored to impress upon our readers, that the farmer should not blindly adopt all the practices he sees recommended in agricultural journals, but that he should in every instance be an accurate experimenter, and carefully test all the different modes of culture recommended, which commend themselves to his judgment, and adopt only such as he finds best adapted to his farm and circumstances.

Jarring the only Remedy for the Curculio.

MESSRS. EDITORS—Finding it impossible to grow plums without some special remedy to prevent the depredations of the curculio,—not to instruct or publish any thing new, but to show what can and what cannot be depended upon as a safe course, I give my experience with that insect for a few years past. Among all the remedies heretofore published, only one has secured the design intended. I do not say that most or any of them are "humbugs," but that the curculio is a "hum-bug" in spite of them. I have tested, and I think fairly, lime, ashes, plaster, sulphur, cotton—all without avail. I do not doubt the sincerity of those giving the above remedies, but think they must have been deceived—that the curculio was not there at all, or in numbers so small as not seriously to effect damage. It requires but little observation to convince any one that insects of all descriptions migrate from place to place, overrunning one vicinity and vacating another of close proximity, or even one or more trees of a garden while others are not infested at all. I know not what Mr. Mathews has, or what else may be discovered, but so far with me *jarring* is the only remedy that has had the desired effect. Either the curculio here is not so sensitive or not so well behaved as in other places, for he seems determined to yield to nothing but death. Therefore I would advise those who wish to be sure of their plums, to commence as soon as they are fairly set, jarring on to sheets, and killing, once a day (at noon) for two weeks. This has with me secured a bountiful crop.

It has been asserted with confidence, that the curculio could not fly into a tree, but always crawled up the body of the tree—hence the cotton remedy. If any one will take the trouble to raise the shell on the back with the point of a knife, he can dicover a silken

wing nearly three-eighths of an inch, folded up, making a full grown insect three-fourths of an inch when the wings are spread, with which he can readily show that he is not obliged always to walk with that appendage on his back. I have seen them rise more than 50 feet in the air at an altitude of 60 or 70 degrees.

In my communication on successful plum growing, your printer made me say, instead of the *past* season, my trees bearing the first season from 1 to 2 bushels each, which is an impossibility. C. S. *Shelburne, Mass.*

Answers to Inquiries about Mules.

Mr. Tucker—In answer to your correspondents, Messrs. Wynkoop and Many Farmers, I will give my views on the subject—1st. Let us inquire what are mules? They are a cross of the ass with the common horse. For what is the ass celebrated? 1st. Great powers of enduring fatigue of all kind, on the coarsest of fare—2d. Less liability to the various diseases and ailments that horse-flesh is heir to. For what is the horse celebrated? For large size, beauty, strength, kindness, tractableness, speed, and a greater degree of intelligence than any other animal for general use, we have in this country. Mules then must, of necessity, have these qualities united, although in a less degree than in either of the originals. This then brings us back to the first point of inquiry. What are mules? A mule is an animal varying from thirteen to seventeen hands in height, of great strength, and good disposition, capable of enduring the extreme heat of our short dry summers without injury. The heaves, ringbones, spavins—in fact disease and blemishes of any kind are seldom seen. They can be raised as cheap and easily as calves—are gathered up by the eastern dealers for market at two years old, and, at the same time bear higher prices than the class of horses sold for all work—are not unruly; on the contrary, quiet and peaceful. I have seen as many as forty or fifty mules and horses turned together, without showing any disposition to quarrel. They have been used on the canals of this state, but are not so well liked as the horses, which I think is owing to the confinement in the narrow stalls, for it is as natural for a mule to roll as for a hen to scratch or a hog to sound the depths of a mud hole. Having stated these facts I leave your inquirers to deduce their own conclusions. Jones.

Messrs. Editors—I notice in the "Country Gentleman," of the 26th April, an inquiry about mules, as to their adaptation to farm work, &c. I have been working with mules, jacks, and jennets for several years, and have broke a good many mules to work—have worked them myself, and can say truly that they are far superior to the horse as regards all kinds of farm work. They are certainly not so comely as the horse in appearance; yet they are more hardy, can do more work, stand the heat better, and pull just as much if not more. Mules are less liable to disease than horses, and will eat almost every kind of rough fodder in the winter season; in fact they prefer it. The medium size, or as we say here, the second rate mules, are much better for farm work than the largest or first rate; they have much more life about them, and handle themselves more lively in every way; besides they cost much less and can live on less food.

Your contributor wishes to know "why they are not more worked than they are." The reason they are not more worked in Kentucky, is because it is more profitable to work mares, (not horses.) Several farmers around here breed twenty mares or more to the jack every year. From this number they can count on having fifteen colts, which are, (or have heretofore been,) worth at weaning time, an average price of about seventy dollars, making in all $1050. The mares that miss bringing colts can do all the rough spring plowing, and those with mules following, can be worked in the crop. A well broke mule has no bad habits, not more so than the horse. But if you could see the Kentuckians breaking them, you would feel sorry, even for a mule; a noose is thrown over his head; he is then choked down, a halter put on him, and he is then learned to lead, by some pulling and others beating; before he is half broke to lead, the harness is put on, and he is fastened by the side of a large gentle horse; he is then started off, and if he does not go, the horse drags him a few rounds, and he is very apt to get down to his work. He is then worked on, all the time, knowing no rest; scarcely the Sabbath is allowed, for if any of the colored population should want a horse to ride five or six miles, he must have the mule, as the work horses are tired and must rest until Monday.

Mules never become vicious or unruly by remaining idle, as horses are apt to do, for when once broke, they remain so. I have never had any difficulty in pasturing mules with horses. If kept within bounds while young, (after weaned,) they are no more apt to jump than horses. But if mules are put in a lot inclosed with a fence two rails high, you may add a rail every day; and will hardly build it high enough in a month, to keep them in; and this is also the way with horses. A farmer that would not wish to keep more horses or mares than can do his farm work, would undoubtedly find it more profitable to work mules than horses.

As to raising mules or horses for market, there is scarcely any comparison, as far as profit is concerned. A good brood mare, in four years will produce four mule colts each of which you sell in September for seventy dollars, amounting at the end of four years to $280, half of which would buy a four years old horse; moreover you dispose of them before winter. Perrine. *Mt. Ida, Ky.*

Penn. State Ag. Society.—At a recent meeting of the Executive Committee of the Penn. State Ag. Society, the proposition to hold the next fair at or near Philadelphia, in connection with the United States Agricultural Society, was negatived by a large majority. The Fair is to be held at Harrisburg, and the Hon. Frederick Watts, we understand, has accepted the invitation to deliver the annual address.

The Muck Lands of Orange.

The far-famed Chester meadows, are in two divisions, the upper and lower, with the village lying between on a gentle swell—the former called Black-Meadow, the latter, Grey-Court. The lower tract is the largest, and in some places of great depth, varying from sixty feet on the western shore where the Erie Rail Road crosses, down to a few inches on the eastern, while the upper one is more uniform, being in no place more than ten feet. The whole contains not far from 3,000 acres, about one third of which is under cultivation, and the rest in pasture and mowing. Every year is adding to the importance of these turfy deposits, and bringing more and more under tillage; and when the two outlets are properly and sufficiently lowered, here will be a tract of land almost unsurpassed in value, being only sixty miles from New-York, near enough to ship all sorts of vegetables perfectly fresh to market every day. Potatoes, carrots, parsnips, beets, turnips, celery, and cabbage are successfully cultivated, and the onion grows in such perfection and yields so abundantly, that to look at a field of them would bring tears in the eyes of a Wethersfield Yankee.

My object in this and future articles, is to bring to the notice of owners of this class of soils, their value, and the importance of a better system of management than most of them have adopted, and also to call tne attention of the readers of the Country Gentleman to the subject, and ask those who possess such lands, to give us their methods of cultivation. I shall begin at what I consider the very foundation of good husbandry, and give my experience in draining, manuring, and tillage.

Whether it is necessary and profitable to drain a sand bank or gravelly knoll, as some visionaries affirm, or not, this much is certain, that for successful cultivation of peat soils, thorough draining is indispensible. Such soils, in their natural state, hold vast quantities of water which prevents sufficient decomposition for supporting useful vegetation, and also contain various acids injurious to plants, which can only be expelled by draining out the water, so that decomposition can go on until the crude vegetable matter has become fit for food for plants. It is well known that brush and straw, when buried in earth, deep enough to be always moist, do not undergo decomposition, except in the smallest appreciable degree. It is utterly impossible to raise a paying crop upon any soil saturated with water, and there are a great many farmers who undertake to cultivate bog meadow, who labor hard and long, and get a miserable return, because their land is only half drained. Their crops are stunted, while the weeds flourish like the green bay tree, and utterly refuse to die. Draining should be scientificaliy done. The lowest convenient place should be selected, not by the eye but by the level, for an outlet, and the land divided into narrow fields, or what is better, into large ones and under-drained at intervals. The underdrains can be made with tile laid on boards to keep them from sinking in the soft muck; or they can be made of brush. Where the ditches are down to hard ground, they can be partly filled with pebble stone which answer first rate.

There is another mode, which I have practiced considerably, and which I think preferable in deep soils. They are made of the turf taken out of the ditch, and are cheap and durable. The manner of construction is as follows. Cut your ditch, say two feet wide at top, with one perpendicular side. Whenever you reach good solid turf, cut it out in square blocks large enough to fit the bottom of your drain, and lay them on the perpendicular side and throw all the other dirt on the other side. When your ditch is low enough, say three feet, cut out a place for the water to run, under the straight side, with an instrument made for the purpose (or it can be done with the shovel,) and then place your square blocks in the bottom, fill up your ditch, and you have a drain that will last your life time. At the ends there should be something to keep the turf, which is made fine by frost, from stopping up the mouth, and also to prevent the musk-rat from getting in your drain. Three strips of boards, three inches wide, nailed together, will answer both purposes. Twenty five cents a rod will cover the whole cost of this drain, and every rod made will diminish the expense of cultivation and add to your crop. J. *Chester, N. Y.*

The Oat Crop.

It is a very common opinion that oats is one of the most exhausting of all grain crops. One of the best farmers of Western New-York, informed us that he never permitted this crop on any portion of his farm devoted to wheat or other grain, but only on land otherwise exclusively used for meadow and pasture. Another skilful farmer never raised the crop at all, preferring to *buy* all that he might need.

We have just conversed on this subject with T. A. SLOCUM, an enterprising and successful farmer of Perrinton, Monroe Co. N. Y, who entertains quite a different opinion. He has cultivated the crop for many years past on a large scale, and regards it as one of the least exhausting. For the past six years, he has raised from forty to seventy acres. During this period a part of his land has been cropped with it every year, and with a single exception, without any diminution in the amount. This annually-cropped ground has *averaged* for these six years, sixty bushels per acre, including last year, when, by the unprecedented drouht, it was reduced to fifty bushels per acre. The land, throughout this period, has *netted* him (above all expenses) twelve dollars per acre, as an annual average.

Our readers will doubtless feel interested to learn his mode of management. After the crop is harvested, he passes a spring-tooth horse-rake both ways across the field, for securing all the gleanings; but, as he observed, this kind of rake having a sort of "baby jumper motion" over the field, a considerable portion of the grain is shelled out from the gleanings, and partly harrowed in by the points of the rake. A thorough harrowing afterwards, insures a good growth

of oats, which is about a foot high before winter. Before the ground freezes, the whole is turned under with the plow, in the most thorough manner—serving as a good green manuring.

Early the following spring, the surface is rendered mellow by means of the harrow and two-horse cultivator, and the crop sown, seven pecks to the acre, by means of a grain-drill.

There is no doubt that the annual green manuring assists in keeping up the fertility of the soil; and there may be some kinds of soil including this, that will long bear heavy cropping with oats. It may be questioned however, whether it is good *permanent* policy to pursue this course instead of a more varied rotation. When we have a strong fertile soil, we prefer to *keep* it so, to its fullest capacity, rather than to draw too hard upon it, as even the strongest may ultimately fail. But cultivators of the oat crop, may however derive some excellent suggestions from the practice detailed above.

Experiments with Salt.

Several years since I sowed a field with barley—soil a marly loam, located on what geologists denominate gypseous shales. Soon after the barley came up, three bushels per acre of salt were sown on two thirds of the field, leaving one third in the center unsalted. The straw of the barley that season generally rusted. Where salt was sown on this field, the straw was bright—where none was sown, the straw was rusty. The crop was best where salt was sown.

In the fall, the field was sown with wheat and harrowed, when three bushels of salt per acre was sown on the *whole* field. The wheat was nearly ruined by the midge, erroneously called weevil.

In the spring previous to harvesting the wheat, the field was thickly seeded with timothy and a slight sprinkling of clover. For three successive years this field was mown, each year producing not less than three tons of hay per acre. The growth of grass was so large and fine as to attract great attention, some observing farmers saying they had never before seen so good. The grass was largest and best on those parts of the field which had received *two* dressings of salt.

In the spring following the last mowing, this field was plowed once, and planted with corn, which at no time appeared promising, and gave less than an ordinary yield per acre.

So far I have given facts. I will now give my opinions, made up from observing the results of those facts.

The barley was benefited by the use of salt. The wheat showed no effect from the salt, though perhaps it would, but all had been salted, though two-thirds had received 6 bushels, and one-third but three bushels per acre.

The grass was best where most salt had been sown, and was more benefited by the salt than was the barley. The corn was poor, and whether the cause was exhaustion of the soil by taking three unusually large crops of timothy hay, or the effects of the salt, or both, I cannot say; but as timothy, when taken off in hay is an exhausting crop, and salt has a tendency to make the earth moist and consequently cold, I think both were injurious to the corn. The crop of barley which followed the corn, was good, showing no difference between the parts where three bushels or six bushels of salt per acre had been used.

If others have used salt on land, I would like to have them give a detailed statement of the application and effects, through the medium of the Country Gentleman. E. Marks. *Camillus, Onondaga Co., N. Y.*

Practical Farming.

Now a word on oats. Formerly I raised oats but once in my rotation, that was after corn, now I sow an additional field. I turn up a clover field, sow with oats, follow with wheat and seed again with clover, at the rate of 15 lbs. seed per acre, (never less.) By this means I get a better stand of clover, than when I plow a clover stubble in the fall. Sow with wheat, and then seed with clover again. I attribute much of my success in farming to always having a luxuriant growth of clover on my warm, dry, gravelly soil. It makes no sod and is fit for any crop by once plowing, provided you do not plow too deep.

A few words on subsoiling. I experimented in a number of my fields, subsoiling portions of each, and I could see no benefit, save in one case. That was a small piece, say one acre or more. It was originally very wet; I drained it through both ways, but the water would stand upon the surface within a few feet of the drain, for several days after rains, and also until late in the spring. It baffled all my skill for many years to get it seeded to grass. Both clover and timothy would grow for the first season, but would be entirely killed out in the winter and spring. In the spring of 1848, I subsoiled it sixteen inches deep. It dried very quick, and very hard, almost like a brick. I planted with potatoes, which amounted to nothing, as the ground remained hard until fall, when I plowed it again, six inches deep, not disturbing the subsoil

In the spring of 1849, I harrowed it down, planted again with potatoes, got a good crop, and the land has not failed of a good crop, of any kind tried on it since. The subsoil is a very hard clay mixed with gravel, which held the water; the surface soil has a little more sand. A crust seemed to have been formed beneath the surface soil, which the subsoil plow broke up, and since then the drains have kept it dry, I have noticed the same thing in other places on my farm, where I have drained swales, but in all these other cases, simple draining effected a cure. In the case cited, had I turned up much of this subsoil on the surface, with manure I might have raised a good summer crop, but my experience has told me that no good clover or winter wheat could be expected, without large quantities of manure to have mixed with it. I find that the deeper I plow the more manure I must use to get the same amount of crop; hence the necessity of having land well manured with clover and its roots. I would rather have a good clover sod for corn, without manure

than the same in stubble ground with 20 loads of common barn-yard manure per acre. This is equally true for wheat, for the deep roots of the clover draw from the subsoil to the surface the materials required for these crops.

Clover should lay but one year. That is, if seeded in 55 with wheat, in 56 it may be mowed for hay,—pastured,—mowed twice, once for hay and once for seed; or else pastured until 10th of June, and then left for seed; then in either of these cases, in the fall it is in a good state to be plowed for wheat; about 4 inches deep is the best, so that the large clover roots are near the surface in an available place for the young growing wheat; or else it may be plowed the next spring for corn or oats; in either case this summer crop to be followed by wheat, and seeded again. I always seed with clover along with wheat.

Clover is my mainspring, for when that fails, then my other crops fail.

I make no compost heaps, but use all my barn-yard manure, in the spring, mostly on my corn ground. The most of it is under shelter, and I do not want it to heat before it is drawn out; then I plow it under to rot there.

I would like to give you my views on some other subjects, but I have already been more lengthy than I anticipated. You can make such use of my experience as you see fit. HENRY BREWER. *Enfield, N. Y.*

The Chilian Guano Fraud.

The *Southern Farmer*, an excellent agricultural paper published at Petersburg, Va., copies our article on Chilian guano, and remarks as follows:

In copying the article on the manufacture of Chilian guano from the *Country Gentleman*, which will be found in another column, it may not be improper to make a few remarks, as the names of the editors of this paper are introduced in it, as is that also of one of the most respectable and honorable mercantile houses of this city. When Messrs. ROWLETT & HARDY were told that the Chilian guano was a fraudulent article, no men could have been more astonished and, indeed, incredulous than they were. They stated they had received it from a house in Boston which had been highly recommended to them by a gentleman in whom they had full confidence, and that it was accompanied by the analyses of eminent chemists. They, however, immediately declined selling it to their customers as a genuine article, though not without some doubts as to the correctness of the opinion we had pronounced upon it. It will be seen, now, that our opinion has been abundantly confirmed, and that the Chilian guano, instead of being a natural deposit, is neither more nor less than a fraudulent compound, manufactured somewhere in the vicinity of New-York, and composed of ingredients of very little value. By the admixture of a small quantity of Peruvian guano and the addition of some water, the action of the carbonate of lime or chalk tends to expel the ammonia, and consequently a very pungent odor is emitted, very well calculated to deceive the inexperienced. The presence of lime may be readily detected by any person who will take the trouble to pour a little acid upon it, for an active effervescence immediately takes place, which is not the case with Peruvian guano even when the most powerful acids are applied. As a further proof of the worthlessness of this Chilian guano, we understand from the Superintendent of the Model Farm that not the slightest effect is observable on the oats to which it was applied, even in large quantities, while the action of Peruvian guano and DE BURG's superphosphate of lime is very striking.

The Use of Snow.

The past severe winter, in its effects on plants, has furnished some striking proofs of the protection afforded by snow. Several specimens of the *tree box*, some of them seven or eight feet high, are as brown as dead grass above the snow-line; while all below is as green as emerald. The Japan Quince, usually regarded as very hardy, although not destroyed by the extreme cold, was so injured and checked in its growth, that while the flowers below the snow are an inch and a half in diameter, and in dense and brilliant clusters, the exposed portion of the shrub is thinly furnished with pale red or pink flowers, not one fifth the size of the former. The only blossoms of the peach that have appeared, have been a few that were covered by snow drifts; and the strong contrast in the color of the wood of the trees, where exposed or protected, has been sufficient to show the precise depth of snow in any part of our peach orchards. Observations made at the Royal Gardens at Kew, in England, (where the winter has also been very severe,) showed a difference of *nineteen* degrees immediately above and below the snow.

Value of Corn for Soiling Cattle.

Mr. TUCKER—I have just read Mr. Morse's valuable article on soiling cattle, and from the little experience I have had, I would advise every farmer to follow his example. I have prepared and planted for this purpose, a small piece of ground every spring for three or four years past, and fed it to my milch cows the latter part of summer, and now think it indispensible with me. I make the ground rich, and put it in drills, for we all know the benefit of stirring the soil around young corn—I also think the stalk and leaf contain more nutriment than when sown broadcast. I think too that farmers generally do not fully appreciate the worth of corn fodder for winter use, and the past long foddering season has been a good time to test its preference to hay for cattle, and especially for milch cows. I have just completed the assessment of personal property in this township, and in every instance where cattle had been kept on corn fodder, found them healthy and in good order, while those that had been fed hay alone, "I do not know the cause of my cattle being so poor, for I have given them plenty of good hay, shelter, &c.;" and in nearly every instance where I made inquiry and learned they had been kept upon corn stalks the fore part of winter, I found they did well till put upon hay. R. H. MACK.

CARE OF HORSES, &c.—Is not the practice of going to supper and leaving a team meanwhile in the field, without any refreshment, both cruel and injurious? Should a horse or ox ever be worked more than 5 hours at a stretch? Does not colic very frequently take place from long fasting and the greedy stuffing which is apt to follow it? Has not the death of some animals been owing to long fasting and its usual concomitants?

A Summer Suggestion for City and Country.

In cities and villages there are many unwholesome and offensive odors from stables, styes and other sources which might be prevented or abated at no great expenditure of money or labor. On a warm day in summer a person fresh from pure country or sea breezes can detect a more or less contaminated atmosphere as soon as he enters the precints of a city. If this contamination can be detected in the cleaner portions of a city, some guess may be made at the virulence of it in those portions which are lowest and filthiest. There are streets in New-York the stench of which is nearly insufferable in a hot day; and though much more offensive localities might be named, no one who has had occasion to go through Mulberry, or Church, or Greenwich, or Pearl or Varick streets, or even West Broadway, can ever banish from his memory the unsavory and sickening odors which have saluted his nostrils on some sweltering day under the reign of the dog-star. Even the back-rooms of some residences pretty far up in Broadway, especially if in the near neighborhood of some livery stable, are far from having any very delectable odors or any very enviable immunity from mosquitoes, though their inhabitants may boast of living in a very genteel locality.

But not alone in cities, and where people most do congregate, are there offensive and undesirable odors to salute the nostrils, but also wherever there is a single family or a separate farm establishment they make some manifestation of their unwelcome presence. Wherever there is a stye or a stable there must be, of course, some most unwelcome smells. And one purpose, unquestionably, of certain odors having been made so very disagreeable is, that those annoyed by them should be stimulated and stirred up to use their ingenuity, their skill, their strength, or in a word, their mental and manual powers, in ridding themselves of the nuisance.

To those, either in city or country, who are suffering in the way we have referred to, we propose at this time to submit,—not a long lesson or treatise on deodorizing agents in general, but only—one brief hint as to *one way* which may be employed either in city or country to neutralize or correct the odors of stable, vault or stye, which are felt by every one to be offensive. Where adding to the value of a manure is an object fully as important as the getting rid of an offensive smell, then an application of swamp muck previously exposed to summer heat and winter cold, or of plaster, or of charcoal dust, or of loamy soil, will be preferable to the plan herewith proposed; but where the getting rid of an offensive odor is the principal object, then the method followed in the statement which follows, is one which may be copied at as little expense and with as little inconvenience as any other. Sulphuric acid diluted with a considerable quantity of water might be as cheap an application, and as effectual, but there would be some risk of burning or injuring person or clothes, at least with careless persons, and on this account the sulphate of iron application, the account of which we subjoin, is on the whole, preferable.

"Mr. Robert Austin, of 65 George St., Manchester, (England) informed the Council that upward of a ton of horse-dung was produced in his stables daily, and that the usual offensive odor and evaporation from it were entirely prevented, by sprinkling over the dung-heap, by means of an ordinary watering can, a solution of a pound of common green copperas in a gallon of water. The value of this chemical agent in fixing ammonia and strengthening manure, had been long known, but Mr. Austin's practical application might be considered simple, effective, and easily adopted in similar cases."

To this statement, taken from the *Farmer's Magazine*, we would only add that in most cases where a considerable bulk or surface is to be sprinkled, more than a gallon of water might be advantageously used for each pound of copperas.

Household Matters.

Churning.—In churning butter, if small granules of butter appear which do not "gather," throw in a lump of butter, and it will form a nucleus, and the butter will "come."

To Remove Rust from Knives, &c.—Cover the knives with sweet oil well rubbed on, and after two days, take a lump of fresh lime, and rub till all the rust disappears. It forms a sort of soap with the oil, which carries off all the rust.

To Clean Brass.—Rub the tarnished or rusted brass, by means of a cloth or sponge, with diluted acid, such as the sulphuric, or even with strong vinegar. Afterwards wash it with hot water to remove the acid, and finish with dry whiting.

Gloss on Linen.—To restore the gloss commonly observed on newly purchased collars and shirt bosoms, add a spoonful of gum-arabic water to a pint of the starch as usually made for this purpose. Two ounces of clear gum-arabic may be dissolved in a pint of water, and after standing over night, may be racked off, and kept in a bottle ready for use.

To Thaw Frozen Pumps.—Some throw in salt, some heat iron rods, &c. but an incomparably better way is to place a small lead pipe within the pump, and pour in hot water by means of a funnel. The pipe should be as long as the frozen portion; and, conducting the boiling water right on the ice, removes it with astonishing rapidity, say one foot per minute, the pipe settling as rapidly. Where pumps are liable to freeze, it is well to have a lead pipe always at hand.

Oiling Latches and Hinges.—Every person who lives in a house, should spend 15 minutes once every month in going over every part with a teaspoonful of oil and a feather, and give all the hinges, locks, and latches a touch. It will save an incredible amount of scraping, banging, jarring, squeaking, harsh grating, dismal creaking, and other divers and several noises, which result from the want of a little oil.

To Extract a Glass Stopple.—When the glass will not come out, pass a strip of woolen cloth around it, and then "see-saw" backwards and forwards, so that the friction may heat the bottle neck. This will cause it to expand, become larger than the stopple, and the latter will drop out, or may be easily withdrawn.

A tight screw may be easily loosened from a metal socket, by heating the latter by means of cloths with boiling water, or in any other way—on the simple principle of expansion by heat.

Cultivation of Flax.

Being at Little Falls, N. Y., a few days since, we visited the Flax factory of Messrs. TUCKER & JOHNSON, and gathered a few items of information which may be interesting to some of our readers. These gentlemen have embarked in the flax business with much spirit and with ample capital; and though last year, from a variety of causes incident to a new enterprise, their profits were little—if not on the wrong side of the ledger—yet, with increased experience, they are satisfied that the cultivation of flax for fibre can be made a profitable business. If it pays the farmer to grow flax for the seed alone, surely it must be profitable when fibre and seed are both used. Nevertheless, the success of Messrs. TUCKER & JOHNSON has not been such as to warrant any of those extravagant calculations which some writers have made in regard to the profits of flax culture.

Last year Messrs. T. & J. could obtain only about 300 acres of flax, and for this they paid the farmers $25 per acre, delivered in the barn. A ton to the acre is an average crop. This yields about 250 lbs. of flax, worth 12½ cents per lb., 75 lbs. of fine tow, worth 3½ cents per lb., and 75 lbs. of coarse tow, worth 1¼ cents per lb., and from 8 to 10 bushels of seed. *Twenty-five dollars per acre they find is more than they can afford to pay the farmers*, and this year they pay only $20 per acre. The soil in the immediate vicinity of Little Falls is not well adapted for flax, and its culture has been abandoned. It is now grown some 8 or 12 miles distant from the factory, principally in South Trenton and Middleville. About 450 acres have been sown in these towns this year. For 200 acres in Trenton, Messrs. T. & J. find the seed and pay the farmers $16 and $17 per acre for the entire crop, delivered in the barn. In some cases they find the seed and harvest the crop, paying the farmers for the use of the land, and for putting in the seed, $12 per acre. Under such circumstances, flax would seem to be a profitable crop for the farmer, but it appears that but few are found willing to engage in its cultivation. "Farmers are too rich in this neighborhood. They have fine dairy farms, and do not care to deviate from the regular routine of business. To cultivate flax with profit, you want to go where farmers are poor and glad to get hold of a little cash." With cheese at 10 cents per lb., butter at 30 cts., corn $1 per bushel, oats 70 cents, and other things in proportion, we are not surprised that farmers hesitate before embarking in a new enterprise.

The earlier flax is sown after the first of May the better is the fibre and the seed; and when sown early, drouth injures it but little. It does better on sward land turned under in the spring, immediately before sowing, than on land that has been plowed the previous year. It is particularly desirable that the land be clean and free from weeds. In Europe, much labor is expended in weeding the flax fields, but here on sward lands this is dispensed with entirely; indeed, if it was not so, with our high-priced labor, we should have to give up the idea of raising flax, for we believe, when sown in rows, in order that it might be hand or horse hoed, the fibre has proved to be of very inferior quality.

Last year Messrs. T. & J. imported their flax seed from Riga. This year they use the Saplin and White Flax, with only a little Riga. It is sown broadcast at the rate of five pecks per acre. They are trying some this year at the rate of two bushels per acre. In England, we believe they sow as much as 2½ bushels on poor land, and 3 bushels on rich land, and we have seen 4 bushels recommended; but the English seed heavier than we do with anything.

The flax is ready to pull about the first of August. It is a nice point to determine just the right time. If pulled too early, or suffered to stand too long, the fibre is injured. It should be pulled when the seed in the bolls is beginning to change from a green to a pale brown color, and the stalk becomes yellow for about two-thirds of its height from the ground In pulling, it is necessary to clean the flax from all weeds, to pull it when perfectly dry, to keep the root ends even, and tie it up in small sheaves and stooks, and not harvest it till it is thoroughly dry. The seed is removed by a simple process, and then the flax is spread out on the ground to rot, from the first of September till snow comes. Messrs. T. & J. have machines for dressing the flax which cost $1950, but which they have laid aside, and now use the old-fashioned revolving wooden knives. They are however about introducing an apparatus for rotting and dressing the flax by steam which will materially facilitate these tedious operations.

Our readers can compare the above facts with an English statement of the value of a flax crop: "The value of a crop of flax, *standing in the field*, is from $40 to $60 per acre—the purchaser to pull the flax. The yield of flax will vary from 30 cwt. to 40 cwt.; the produce of seed about sixteen bushels. The price of the flax after threshing out the seed, $14 to $15 per ton."

Guano and Superphosphate of Lime.

I have used some guano and superphosphate of lime the past two seasons. In 1853, superphosphate was of no perceptible benefit to my carrots. It was sown in the drill with the seed, on moist ground. A kind of weed which we call *barn* grass, was much ranker on the drills where superphosphate was put, than on others. Last season, I put a six quart pailful of superphosphate with the seed of two rows of carrots, each of about 20 rods in length. The gain of one row as compared with a row alongside, was about one half bushel. I was not satisfied that there was anygain in the other. To the eye, there was no perceptible difference at any stage of the growth. Parallel with these rows of carrots, was a row of corn on similar soil, to appearance, treated with superphosphate, which appeared much better than corn on guano in rows alongside of it, through the season, and yielded better at harvest time. The result was similar on other moist soil, but not so on that which was dry, except early in the season as to growth. *Corn yielded best from guano on dry soils with me.* H. *Hancock, N. H.*

Thomas Gould's Farmery.

A barn was formerly considered an unsightly object, to be shut out of sight from a neat residence, by distance, or by close planting with trees. We are glad to say that some farmers have made the discovery that a barn may be as neat in appearance, in its own way, as a dwelling house; and that a country residence has an *incomplete* and lonely aspect, without the comfortable appendages of well arranged farm buildings, kept in neat and cleanly condition, enlivened by various well-fed domestic animals, and embellished with a due proportion of shade trees.

One of the most neatly appearing collections of farm buildings we have lately seen, is that of THOMAS GOULD, near Aurora, Cayuga county, N. Y., recently erected. It consists of ranges for poultry, rabbits, &c., as well as for horses, cattle and swine, and is built in a neat and substantial manner. The exterior is boarded vertically, battened, and painted light brown. The stables are so constructed that the liquid manure is carried off in troughs to a large tank built of masonry and with water-lime, and covered with a roof. The solid manure being also thrown directly from a portion of the stables into this tank, preserves it from freezing in winter, and consequently prevents the water-lime coating from cracking and scaling off with the frost. The reservoir being shut tight, preserves the contents from evaporation, and the manure is kept thus of the richest character. We fear, however, that the want of circulation in the air will cause the roof timbers to decay, and would therefore prefer to depend on absorbents, such as loam, peat, leaves, chopped straw, &c The liquid manure was applied last summer to the garden, with great effect. The apartment for pigs has an alley or walk through the center, from which they are fed in the apartments on each side, the floor sloping towards the central walk, and their bedding lying most remote from it. This arrangment always insures a *dry bed* for them, all liquids from feeding or otherwise, immediately finding their way to the troughs for its escape, placed at the alley-partitions.

T. Gould has a fine collection of improved animals. His Black-hawk stallion "Hero," is well known, and is a most beautiful animal, and received a first premium at the State Fair at Saratoga. His Devon cattle are of an excellent quality. We observed about thirty handsome specimens of Madagascar rabbits. His other animals are not behind in quality.

An experiment was made last year, showing the value of a deep soil, which is well worthy of mention. Grass seed had been sown on three pieces of ground, alike in quality, but difierently treated. One portion had been trenched two or three feet deep. Notwithstanding last summer's extraordinary drouth, a heavy crop of grass was cut three times during the season. Another portion had been spaded ten inches deep, and from this only two crops were cut, and both of them lighter. The third portion was sown with grass seed, with nothing but ordinary preparation, and the growth was so light that mowing was not attempted.

Summer-Stabled Horses.

Horses which have nothing but dry hay and grain all the year through, must suffer both in comfort and in condition. Like other domestic animals they relish variety in their food; and the tendency of such variety to improve the condition of animals has been so often noticed as to have passed into the common proverb—"Change of pasture makes fat calves."

Truths of this kind seem to be very generally forgotten by some of those who have occasion to keep their horses in the stable throughout the whole year. Many seem to forget or ignore the fact, that while dry hay and unbruised grain may be the handiest and least troublesome feed for their horses, these useful servants are thereby curtailed of comfort and prevented from enjoying that amount of good health and of ability to endure labor, which they might obtain by a somewhat different mode of feeding.

Various methods might be employed to secure some variety in the food of summer-stabled horses according to the varying circumstances of their owners. Roots, corn for soiling, grasses cut green, mashes, and other things might be occasionally introduced as agreeable and wholesome changes. At the present time, when hay and grain are so high, economy as well as the comfort of the horse might be consulted by some occasional change of food, and where nothing can conveniently be had but hay and grain, something desirable might be affected, both as regards expense and the health and comfort of horses, by cutting the hay quite fine and steaming it occasionally, and by grinding or bruising the grain. Hay cut and grain ground will go much farther than in the natural state. We *know* that a horse may be kept in *good* condition on a daily ration of three pecks of cut hay and four quarts of Indian meal; and if the yearly amount of such an allowance is calculated it will be found that it requires about a bushel of corn per week, or fifty-two bushels per year, and one ton of hay (which should be of the very best quality) for feeding a horse during a whole year. *This is economical;* and if boiling water should be poured over a part of the hay occasionally and the meal with a little salt added to it, it would give a variety and a degree of succulence to the otherwise dry feed, which would make it more relishing and wholesome.

We think this hint, if practically applied, will prove of service both to man and beast—both to horses and their owners. We may add here, being forgotten in its proper place, that horses will sometimes prefer boiled turnips or ruta bagas to raw ones, and meal will make them still more acceptable.

GREEN RYE FEED.—A correspondent of the *Germantown Telegraph* says:

"The season with us has been unusually backward for pasture; it has been our practice to sow *Rye* on the ground that we intend for potatoes the following season, well manured either with stable manure or guano, the latter of which I prefer for this ground. The rye sown last fall, *we have been mowing over three weeks*, and the result has been that we have had as much milk and of as good quality as could have been obtained from the best of pasture."

Wire Fences.

We inserted in a late number the inquiry of a correspondent relative to the latest and most reliable experiments with wire fences. Having had some experience for a few years past, and of a somewhat varied nature, we give the leading results, and would invite any thing further of a decided and practical character, from our correspondents.

1. The wire should not be smaller than No. 5 or 6, and care should be taken that it be not only well annealed before purchasing, but that it be of the very best and toughest material, *perfectly free from splinters and flaws.* Failures often result from a poor material and from wire of too small size.

2. Living trees, and not common posts, should serve for stretching the wires, at least at each end, and at several points between. It is next to impossible to secure artificial posts, so that the wire in a state of tension will not cause them to give way and finally to be drawn over. They may stand very stifly for a time, but by a constant pressure they will gradually give way. For the same reason, trees less than eight or ten inches in diameter at the ends, will not answer.

These are the two leading requisites for success.

We lately constructed about 50 rods of wire fence, which from some previous experience, we are confident will last for many years with very little attention.

It is on the lower side of a piece of woodland, which descends towards a pasture, animals being allowed to run in the pasture but never in the woods. Hence there can be no danger of their dashing up the hill against the invisible wires—which under other circumstances are often broken by cattle at full speed.

The fence is not straight, but has considerable flexures in stretching from tree to tree. Where the space between is more than ten feet, the wires are kept to their places by being made to pass through holes made in small upright iron bars. The holes in these bars were punched at a machine shop, at 25 cents per 100 holes.

Holes are bored through the trees with a half inch auger near one side, and the ends of the wires fastened by loops through these holes; or as in the annexed figure. They also pass, occasionally, through holes in

the intermediate trees, but are more frequently secured to the sides of the tree by staples, care being taken in this case that the tree is *within* the angle of the flexure and not without it, which prevents the wire from flying off from the tree. When splicing is required, the ends of the wire are looped together as in the annexed figure. The wire expanding and contract-

ing by changes of temperature, the distance between the extreme posts should not be more than about fifteen rods, and the screws, which are furnished by agricultural warehouses, for this purpose, applied, one to each wire, for stiffening or loosening twice in the year, as those changes may require.

The cost of this fence, with five No. 6 wires, and three sets of screws for the fifty rods, and including the cost of erection, was about 75 cents per rod. The wire was procured for about 6 cents per lb., the screws at fifty cents each, and the staples, manufactured and sold for this purpose, at a low rate.

We cannot recommend the wire fence for ordinary farm divisions, for the reasons already stated; but along the borders of woods, where trees may be used for stretching-posts, it answers the purpose well. On level ground, however, cattle would be more likely to strike it with force, than if they were compelled to climb an ascent against it, and for this reason wire as heavy as No. 4 or 5 should be used, making the cost about one dollar a rod. if well made.

Trapping Grubs and Cut Worms.

A writer over the signature of C. Q. in the May No. of the *Mich. Farmer*, relates his success in preventing the depredations of these pests of the farmer by a new and very ingenious invention of his own. As neither fall-plowing nor any other generally known method is much to be relied upon, probably many may be induced to try this newly proposed method. If found as successful as C. Q. represents it, we shall be happy to make a report thereof, and to be the organ through which those who may find it useful shall send a vote of thanks to the original inventor.

Last spring, says C. Q. "I tried an experiment with the "varmints," which I will relate for the benefit of whom it may concern." He planted his corn on a clover-sod plowed in spring. While planting he found plenty of the small grubs. The corn was planted about the 20th of May, and as soon as it came up they commenced their mischief. Knowing no reliable or certain way of saving the corn, he concluded to *trap* them. For this purpose he took a round stick, 3 or 4 ft. long and about 2 inches in diameter, and making one end sharp, and taking two rows at a time, he made from two to four holes, 4 or 5 inches deep in or close by every hill. After fixing several rows in this way he waited to see the result. On examination he found that almost every hole had one or more worms in it. In one hole he counted as many as six. He then went over the whole field in the same way, and the result was that hardly a hill of corn was destroyed after the holes were made, while his neighbor's corn just over the fence, which was on ground plowed very early, was more than half cut off with the worms. "It might be supposed," says C. Q. "that when the fellows fell into the traps they would bore into the side and escape; but on watching them I found they would try to climb up the side, but the sides being smooth they always fell back again, when about 24 hours of sunshine and starvation would put an end to them. They usually commit their depredations in the night, and while crawling around to find the corn they tumble in." An additional recommendation of this method is, that the birds will not pull up the corn, when they find plenty of *grub* already provided for them.

C. Q. states farther, that a portion of this field of corn looked green, and flourished luxuriantly, while another portion looked pale and yellow. To the former he had applied (a tablespoonful to each hill) a mixture of 2 parts lime with 3 parts of ashes. The latter had no such application.

Save the Bones from going to Waste.

There is, probably, not a farm-house in any region of country where this paper circulates, around which more than a dollar's worth of bones might not be picked up in the course of a year. Let some box, barrel or bin be set apart for the storing of every bone which can be picked up around the premises, and the amount collected will probably excite some surprise.

The bones thus collected may be used to much advantage as a fertilizer, in various modes of application. They might be used whole and unbroken if you were trenching or digging deep, either as a preparation for setting out grape vines or fruit trees, or for renovating either of these. The rootlets of the vines or of the trees usually find out such rich supplies of food, and old bones have been found, in such situations, encircled with a net-work of spongioles and rootlets. They will supply food for trees or grape-vines for a series of years, if used in this way, but will produce no very marked effect at first.

When a more immediate effect is wanted, and to secure a beneficial effect on the generality of crops, bones must be broken or pulverized. This may be done either by burning them, or boiling them in ley, until they become friable, and then grinding or pounding them to a powder. The method of rendering bones friable by boiling them in common ley is the preferable one, as you thus secure the gelatinous or gluey matter of the bones, which, in itself, is a valuable fertilizer. The ley in which the bones have been boiled may be diluted until no alkaline taste can be perceived or very little, and in this state the diluted alkaline solution of gelatin may be applied to corn, beans, peas, cabbage, or almost any garden vegetable. The bones may then be pounded coarsely or ground, and used to turnip or other crops as bone dust, or as a top-dressing to corn, cereal grains, grass, or worn out pastures. Or you may make a pure superphosphate by putting any quantity of the bruised bones into some earthen jar or dish, and adding to them half their weight of oil of vitrol diluted with from two to three times its bulk of soft water. By occasional stirring for a few days this will become a paste which may be applied in the *liquid* state after being much diluted, or in a dry state mixed with charcoal dust, dry muck, saw-dust, plaster, loamy earth or sand.

As accidents in the way of burning or discoloring spots of the clothing are apt to happen from the handling, mixing and stirring of the oil of vitriol, it has been proposed to disolve bones in a ley of lime. At a recent meeting of the Hillsboro' Ag. Society at Manchester, N. H., Gen. RIDDLE, being called upon by the President to relate his experience in the use of guano and other special manures, made some statements in regard to this way of dissolving and using bones, of which the following is a condensed summary.

Gen. RIDDLE took 60 galls. lye from oyster-shell lime to 200 lbs. of bones, and boiled them together a few hours, and the bones were all dissolved or reduced to a powder. A bushel of lime, he says will make six gallons of lye; and, farther, that bones dissolved or reduced in this lye make a dry powder, which may be applied like ashes. He put a gill of this powder to a hill, on 20 rows of corn, and omitted it on 5 rows through the field. There was an astonishing difference in the appearance of those different portions of the field. The corn where the bone-dust had been applied was much the largest, and of a far deeper green in color.

The mode of preparing bones for use by putting them into a hogshead with ashes, we have not found to work well. We prefer to use the lye from the ashes which, whether used cold or hot, dissolves the gelatinous part promptly, leaving the inorganic part easily manageable. In THE CULTIVATOR and COUNTRY GENTLEMAN for 1854, will be found several articles on the preparation and use of bones us a fertilizer.

Even if not prepared in any way, let not bones be wasted. Let those who cannot be at any "fuss" with them, bury them deep, in small parcels, in his garden here and there, or near his grapevines and fruit trees, and he shall not lose his reward

White Turnips for Cows.

MESSRS. EDITORS—It will soon be time to sow turnips. I esteem them very valuable for milch cows. With your permission I will tell your readers how I raised and fed 500 bushels of turnips to milch cows.

My wheat was harvested early in July. I took three acres of stubble and drew upon it about 20 loads to the acre, of stable manure, muck and leached ashes, in about equal quantities. I then plowed the stubble, dragged thoroughly, and sowed common flat field turnips, brushing them in. In the fall I gathered about 500 bushels of good sized turnips, which I commenced feeding to my cows as gathered, and placed the balance in a *cool* barn cellar and fed them out every day until they were all gone, sometime in January I think.

"But," says the objector, "your milk and butter tasted of turnips." No, it did not. We made no butter but furnish about 120 customers daily with milk, and not the first one of them ever knew or mistrusted that we fed turnips. Not a single complaint reached our ears. I think this was owing entirely to the *manner of feeding*, and if any of your readers will follow our course *exactly*, we are confident the milk or the butter will never taste of turnips.

We had 2 men to milk 10 cows each, and the third man put the turnips in a long box and cut them with a spade, after which four quarts of corn and cob meal were sprinkled on each bushel. As soon as the milking was finished, the cows were fed 1 peck of turnips each; this was done twice a day, and the cows gave a good supply of milk. I think the time of feeding is the point. The cows must be fed *immediately* after milking and at no other time, and the quantity fed must be such as they will eat up immediately. With these precautions we have a feed for cows which can be raised very easily and very economically.

E. WARE SYLVESTER.

Lyons, N. Y.

The Chilian Guano Fraud.

The *American Farmer*, published at Baltimore, Md., copies our article on the "Chilian Guano Fraud," and remarks:

Two lots of 100 bags each, of guano purporting to be "Chilian," were consigned to this market from Boston and New-York in April, as will be seen by reference to the Inspector's report for that month, published in our paper. These lots came highly recommended with a printed circular and analysis signed by Dr. Hayes, State Assayer of Massachusetts, and endorsed by Dr. Mapes, Professor of Agricultural Chemistry, Newark, N. J. After speaking of its peculiar qualities, they say: "In any application where Peruvian Guano succeeds, this guano may take its place, as its ammonia compound is sufficient in quantity and condition to render it a powerful fertilizer." In a letter subsequently written by the consignor from Boston to his agent here, after receiving the analysis of the Inspector here, (making it comparatively worthless,) he says the Inspector must be in error, as he is assured by Drs. Mapes and Hayes, that it is equal to the best Peruvian, and that it commands a high price in England. At the request of the Inspector, the consignee had an analysis made by Dr. Stewart, of this city—the result of which confirmed the analysis of the Inspector, and proved its commercial value to be, as estimated by him, but $13 00 per ton, while it was held at $40, and said to be equal to Peruvian. The result has been that not one pound has been sold in this market, and the exposition made in the "Country Gentleman," confirms the written opinion given the consignee by the Inspector, that neither lot had ever been within 3000 miles of the coast of Chili.

From the above, no one can doubt that the article manufactured near Newark, is the same as that sent from Boston and New York to Baltimore. We estimated its "*outside value*" at $15 per ton. Dr. STEWART estimates it at $13. We were told in Newark, that it had been sent to England, and the consignor avers that he was informed by "Drs. MAPES and HAYES, that it commanded a high price in England." Can any one doubt, therefore, that the "Chilian guano", referred to by Messrs. HAYES and MAPES is the same as that described by us as manufactured near Newark?

Thanks to Messrs. REESE and PLEASANTS, the guano inspectors at Baltimore and Petersburg, the farmers of Maryland and Virginia have been put upon their guard against this worthless stuff, which some one at Boston has endeavored to palm off upon them, upon the authority, *as he states*, of Prof. HAYES, "assayer to the State of Massachusetts," and Prof. MAPES of Newark. We trust, however, that one of these gentlemen, (if not both,) will be able to show that he has been in no wise accessory to this attempt at fraud. Our columns are open to these gentlemen, for any explanation they may wish to give, of their connection with this matter.

We also call upon the gentleman at Boston, who sent this spurious guano, to Petersburg, Richmond, Baltimore, &c., to inform the public whether *he* was deceived by the maufacturers of the article and by the analysis and recommendations of Messrs. HAYES and MAPES; and if so, to come out and clear his character from the stain which cannot fail to attach itself to his "respectability," if he remains any longer silent. He knows where he procured the "Chilian Guano," and, if he was deceived respecting its character, he can easily clear himself by exposing those by whom he was deceived. Will he do it?

Horse Breeding.

It may be accepted as a rule, having few, if any exceptions, that it is most profitable to breed the best descriptions of horses. These can only be obtained from first-class animals; and even the use of such will not be sufficient without the addition of the exercise of considerable skill and good judgment in the rearing and management generally.

Notwithstanding the unquestioned and manifest truth of this position, many act in contrariety to it, and continue to breed from inferior animals. Many permit themselves to indulge in such a *short-sighted* economy and in such erroneous calculations as lead them to think that they cannot afford for breeding purposes anything but old and broken-down mares. And then the impression seems to be very general that perfection or good qualities in the sire will counteract and redeem any defect in the dam. That the sire does exercise a powerful influence on the general appearance of the progeny is not to be denied, this being most marked and manifest in the general outlines and in color. But the qualities of temper, disposition, endurance, courage and others of like nature, are generally more evidently derived from the dam. A gentleman with a quick eye for good points in a horse has stated, that in repeated journeys through some of the Western States, he has seldom seen any superior, or even any really good horses. These States, or those portions of them which are situated upon the main thorougfares, seem to abound in all kinds of half-bred and defective horses, which would be of small value in the best Eastern markets.

To raise good horses, it has been often said, but needs to said again,—we must begin with sound and good materials. Both horse and mare must be free from any constitutional or transmissible vice or defect, such as spavin, ring-bone, contracted feet, heaves, or any affection of the breathing apparatus. If either parent is thus diseased or otherwise defective or unsound we cannot obtain a sound progeny. Occasionally an animal may be produced which may appear to be sound and healthy, and may continue to appear so until hardship, ill fare, or the attack of some disease, brings the defective constitution or hereditary taint sooner or later to the open light.

While so many errors continue to be committed in the breeding of horses,—while so few possessed of the requisite skill, tact, means and good judgment, are engaged in this business, it cannot be otherwise than that it might be carried on with *no small profit* by any possessed of the skill, tact, conveniences and judgment which are necessary for the highest success. A large number or a majority of purchasers have discrimination enough to discern between the offspring of parents of good constitution and the most valuable points, and the offspring of parents defective in these particulars. In addition to a proper selection of animals to breed from, there are other things essential to rearing horses of the most desirable qualities. Among these we would name as the most important, proper care and feeding during gestation, and also during the whole period of growth from infancy to maturity. The profits, as well as the satisfaction and pleasure, of the breeder will, as a general rule, correspond in some measure, with the amount of skill and good judgment exercised in these and other particulars of managment.

Singular Death of a Calf.

EDITORS ALBANY CULTIVATOR—Having just lost a beautiful thorough bred North Devon heifer calf, under the following circumstances, I shall feel greatly indebted to any of your correspondents who can throw any light on the subject, so that I may if possible provide against a recurrence of a similar case; or who can suggest a remedial agent? The calf (about 2½ mo. old) was turned to the dam in the morning, in its usual health to all appearances, frisking and playing about the farm-yard; as soon as it had finished sucking, the milk maid observed the milk spurting from its mouth, and in a few minutes it began turning around in a rapid manner, beating the left side with its head, and thus continued to do for about 2 hours, when it fell and expired. There are about 2 dozen laurel bushes growing in my lawn in which, it being well set in artificial grasses, I permit my calves to run during the day. I have frequently noticed them nibbling at the bushes, but if it was the laurel poisoned the calf, would she not have been affected before sucking in the morning, or is it probable that the laurel leaves and milk proved a poisonous combination? The calf had sucked the previous night, and appeared to be, in the opinion of the milk maid, enjoying its usual health and even frolicsome, until turned to the cow in the morning The dam grazes on a salt marsh in the morning and a clover piece in the afternoon. The case appears to be inexplicable to me, and I shall be under many obligations to any gentleman who will solve the mystery through the pages of the Cultivator. D. H. HATTON. *Nansemond Co., Va.*

Fatal Disease in Horses.

MR. TUCKER—I wish to state in your widely circulating paper, that last fall a most alarming disease broke out amongst the horses in this and some few of the adjoining counties. It continued through the winter, and I think has not yet entirely subsided. It has killed perhaps two hundred head.

The seat of the disease is doubtless in or about the brain, as dissection shows the membranes in that locality inflamed, and in many cases in a suppurating condition.

The animal staggers, and often pitches about violently; beats its head against the stable wall, until it is much bruised, and the wall bloody; turns blind, and in many cases dies in a few hours—comparatively few recovering at all.

The disease is new here, and remedies are but guesses, and seem to do but little good. Some call the disease *blind staggers*, with what propriety I know not.

If you, or any of your readers, have any experience touching this disease, its cause and remedy, it will b read in this locality with much interest, as some persons have lost nearly or quite all their horses with its great suddenness of attack and fatality. E. LINK. *Greene county, Tenn., May 9th.*

Management of Rabbits.

MESSRS. EDITORS—I will reply to your able and complimentary correspondent, Mr. HUTCHINSON, in the *Country Gentleman* of the 17th May, to the best of my ability. Being well pleased with the Lop-eared or Madagascar Rabbits, I endeavored to breed them, but failed in many instances. After much inquiry I came to the conclusion that to ensure success we must conform our management and food as nearly as circumstances would permit, to the climate and productions of their native country, and on so doing, our success will mainly depend.

Ex. No. 1.—Erected at considerable expense, a covered building 22 by 12, divided off into pens 4 by 8, with every convenience for a winter or summer residence, and dedicated it "Our Rabbitry." Gave the rabbits good and sweet hay and oats, all they would eat—ripe and sound apples every day—turnips all they would eat, and sometimes gave a medium sized cabbage leaf to a full grown rabbit—sometimes would omit for 2 or 3 days giving anything but hay and oats—gave no water at any time; and the result was they were doing well; and as the man we read of said, "He was doing well, and wanted to feel better."

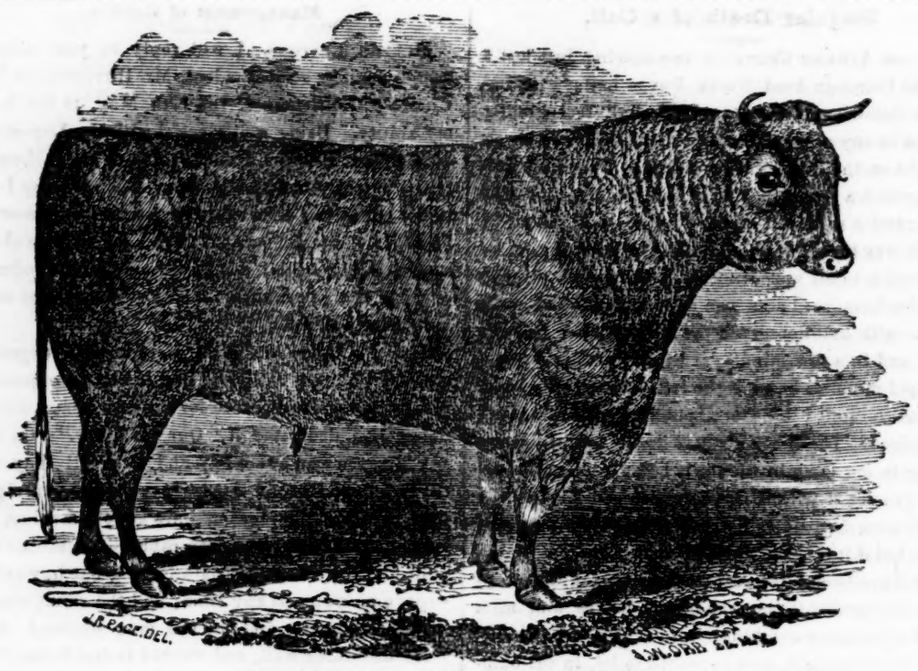
Ex. No. 2.—We commenced in the spring, and continued to the middle of July, giving them all they would eat of excellent green clover and other succulent food, and lost some of the *old stock* and every young rabbit before 4 months old.

Ex. No. 3.—Commenced cutting short of all green food, cabbage and the like in particular, and was getting along better. Our old rabbits did not die, and succeeded in raising one or so out of each litter. Thinking it would do a litter of young (2 months old) good, made a pen out in the open ground, partly covered so as to shield them from a storm, and they all died before 3 weeks.

About this time we were getting over the "rabbit fever;" but our friend handed us "Delamater on Rabbits," &c., and we began to "breathe easier," and quietly submitted to follow out his directions as far as our climate and circumstances would permit, and have succeeded in doing well up to last week, when we thought, as a final and last experiment, we would just try Mr. ROTCH'S system of feeding, on an old *doe*, which until this time had been with us through all our *adversities*. The result was we *buried* her on the 28th May, 1855.

To breed successfully, "Madagascar or Lop-eared Rabbits," *dry food*—temperature, summer and winter, about 75 degrees Fahrenheit—"hands off, or look but don't touch the young," and it will apply to the old—and if you desire to feed *grass*, cut and let it dry one day in the sun. We have of late given a small handful fresh cut without dew or rain upon it, but give it as a salad. Give no leaves of cabbages or the like at any time.

The past winter we fed the best of hay and oats, all they would eat, together with a medium sized ruta baga or turnip, to a full grown rabbit, each day, and occasionally the *stumps* of cabbages, but on no occasion *leaves*, as we feel certain it will do them no good, and will injure in a greater or less degree. Avoid placing your hutches in a damp place or draughts of wind, as it is certain death to the old and young. JONATHAN RAMSEY. *Middletown, Conn.*



North Devon Bull Frank Quartly.

Frank Quartly (205 Davys' Devon Herd Book) was bred by Mr. John Quartly, the celebrated English breeder of Devons. He was selected and imported by Col. MORRIS of Mt. Fordham, his present owner. He won the 1st Prize as an aged bull at the N. Y. State Show in 1854, and the 1st Prize as a two-years old at the N. Y. State Show in 1853—also the 1st prize at the American Institute in 1853. Sired by Earl of Exeter (38), by sire Baronet (6), dam Curly (96), by Favorite (43.)

Another Way to Raise Calves.

L. TUCKER—Among all the varions ways for raising calves, described by your correspondents, there seems to be none adapted to the wants of the cheese dairyman. The farmer keeping thirty cows, should be able to raise some half dozen calves annually, from the best milkers in his herd, to supply the place of those failing from old age and casualities of various kinds, and to improve his dairy stock, at a cost somewhere near the value of the animal when matured. The idea of raising stock to supply our wants by feeding calves for three or four months on new milk, either from the pail or at the teat, is to say the least, *simply absurd*. One gallon of milk makes a pound of cheese worth to the producer ten cents, or the same value if made into butter. A calf requires two gallons perday, equal to twenty cents. Three weeks feed at this rate amounts to as much as the calf may be expected to bring at four months age. There is then a loss of twenty cents per day for the remaining two or three months that they are fed, amounting to a loss of at least eight dollars each the first season. In a butter dairy the skim or sour milk may be fed perhaps. Unless there is some cheaper method to be practiced, *we* can never render our *city beef eaters* any relief.

My method is as follows, and calves may and have been raised by it that were very far above the average, even of good lots, at four months. Take the calf from the cow at three days old, and learn it to drink; it will learn far easier then, than at any time after; feed new milk twice a day for two weeks and once a day one week longer. At two weeks begin feeding once a day, and in a week more, twice a day, *porridge*, made of three to four quarts of sweet whey and one pint of meal of a mixture in nearly equal parts of oats, buckwheat, corn and rye. Cook as if for one of the human family. The cost of one quart of this meal, (daily mess for each,) may be three cents, which is all the value they consume, the whey being of too little value to make any account of. Give this feed four months, and continue the whey a month longer, always with a good bite of grass, tender and sweet, and no fears need be entertained for the result. The first winter give warm shelter, good hay, and one pint of oats each, daily, and my word for it you will never be ashamed to have a neighbor call and look at your young stock. VERMONTER.

AMERICAN INSTITUTE.—The regular annual election of the American Institute, came off on the 10th inst. The following ticket was successful:—

President—ROBERT L. PELL.
Vice Pres'ts—Robert Lovett, D. Reese, Joseph Torrey.
Rec. Sec'y.—Henry Meigs.
Cor. Sec'y and Agent—Wm. B. Leonard.
Treasurer—Edward T. Backhouse.
Finance Committee—John A. Bunting, George Bacon, N. G. Bradford, George Dickey, James R. Smith.
Managers of the Fair—Peter B. Mead, Isaac V. Brower, Jacob C. Parsons, Samuel D. Backus, J. N. Wells, Jr., Bailey J. Hathaway, David R. Jaques, Henry Steele.
Committee on Agriculture—David Banks, Robt. S. Livingston, Thomas Bell, Nicholas Wyckoff, D. K. Sherwood.

THE DOUBLE BRUGMANSIA.

Some of the old family of *Daturas*, now called *Brugmansias*, are well worth a place in the flower garden during summer, for their very conspicuous blossoms. They readily strike from cuttings in the ordinary way, and if allowed plenty of room and water during summer, soon grow to large plants, without which they do not flower good or appear very effective. They also require the protection of the green-house in winter. The best way is to select a good open spot on the lawn, and form a round bed about four feet in diameter, of rich earth, and plant a good strong, healthy plant about the first or second week in May. They will soon commence flowering, and continue till fall, when they will require well cutting back, and may be placed in any spare corner of the green-house. They should be kept from growing as much as possible during the winter, by withholding water except sufficient to keep alive, and by placing them in the coolest part.

There are several kinds worth growing; the one illustrated above, *B. Knightii*, is perhaps the most showy. The flowers have a sort of double appearance—that is, one of the tubes placed within the other. The flowers are pure white, often nine inches long, and highly fragrant, especially after nightfall. *B. sanguinea* has flowers of white and green; *B. sauveolens*, large white flowers, sweet scented. *B. floribunda*, has orange colored flowers. EDGAR SANDERS.

Liquid Manure at the Roots.

The following mode of applying liquid manure directly to the roots of plants, without moistening or baking the surface, is furnished by a correspondent to a late number of the London Gardener's Chronicle. It may perhaps serve as a valuable hint to the acceleration of the growth of other plants.

Allow me to bear testimony to the value of this mode of applying liquid manure to Melons and Cucumbers. I have practiced it for the last five years as follows:—Having put in the pit or frame about two thirds of the soil intended for the plants, I then placed on this soil horizontally, at about 18 inches from the sides of the pit (all round,) a row of common drainage pipes about two inches in the bore, together with three or four placed perpendicularly leading into them—I then put on the other third of soil. By this means you are able to water the roots with liquid manure without interfering with the surface. As a proof of the success of the plan, I may mention the following facts:—On the 21st June, 1853, I exhibited a Victory of Bath Melon at the Guildford Horticultural Exhibition, and gained a prize. I brought it home, sowed the seeds next morning, and cut and showed on the 24th September at the same place, from this sowing, and gained another prize. This surely was not bad work.

On the Agricultural Value of Gypsum.

BY SAMUEL W. JOHNSON.

No. I.—Nature of Gypsum—Results of Experience.

It is nearly 100 years since gypsum (plaster of Paris, sulphate of lime,) began to acquire its agricultural significance. Since that time it has become celebrated on account of the successes that have attended its use, while the ill results, and want of results that have followed its application, have not failed to make it many enemies. FRANKLIN in the United States, and SCHUBERT VON KLEEFELD* in Germany, toward the close of the last century, simultaneously gave a great impulse to the use of gypsum. Within the last 70 years an immense number of observations and experiments have been made with it, and yet to this day the method and condition of its action are very imperfectly understood.

It is the writer's intention to give a short summing up of the most reliable information as to its uses and application, derived from the statements of practical men; then to discuss the theory of its operation, and finally, to submit a plan for a practical and scientific investigation of its action and effects.

The reason why this subject is yet so obscure, is not that the mystery which now envelopes it, is impenetrable: it is, that the proper means to throw light upon it, have not been employed. There cannot be the slightest doubt that patient investigation will in course of time clear up all contradictions, and doubts, and make every thing plain, and though probably many years will elapse before we shall fully, or sufficiently, understand the subject, yet probably, also, in a few years we may see it from a new and better position, provided we seek to solve the problem in an earnest and intelligent manner.

Before we attempt to learn that which is now unknown, we must first of all carefully examine our existing stores of knowledge—we must have in mind all that has been done and learned relating to the subject: we thus acquire points of departure, discover the trails which may guide us through the maze, and save ourselves the trouble of repeating what has been already either well, or vainly done.

What is gypsum? When pure and unburned, 100 lbs. contain:

Lime,	32½ lbs.
Sulphuric acid,	46½ "
Water,	21 "
	100 "

The water is in chemical combination with the sulphate of lime. By heating the compound, the 21 per ct. of water is driven off, and what remains, called burned or boiled plaster, consists in 100 parts of

Lime,	41 pts.
Sulphuric acid,	59 "
	100

The agricultural effect of burned and unburned plaster, so far as we know, is precisely alike, for when the former is exposed to dews or rains it immediately recovers its water, unless it has been too strongly heated, in which case it attracts water slowly or not at all. This attraction of water is in itself no advantage, for the water attracted combines chemically with the plaster, and can never be of avail to the plant any more than the water already contained in unburned gypsum. When the plaster has thus satisfied its chemical thirst for water, it has no more absorbent power for that substance, than so much ordinary soil, and hence the notion that plaster helps vegetation to water, and is thus of agricultural value, is not supported by a particle of evidence.

The advantages of burned plaster are, that it is more easily reduced to a fine powder, which facilitates its solution in water and its distribution throughout the soil. Besides, by its use the transportation of 21 per ct. of water is saved.

On the other hand, unburned plaster is cheaper by so much as the burning costs; and burned plaster, if too strongly heated, may become a little less readily soluble in water. This latter consideration is not probably of much weight, so that it is reasonable to suppose that on the soil

79 lbs. of burned plaster = 100 lbs. of unburned plaster.

Actual experiments have failed to establish any superiority in the agricultural effect of one form over the other, in case both were equally pulverized.

The above statements refer to *pure sulphate of lime*, but plaster as quarried for agricultural purposes often contains several per cent. of admixture, as clay, carbonate of lime, &c. These are of little consequence unless their quantity be quite considerable; and they can hardly interfere with the action of the gypsum, unless indeed it be burned at a very high heat, when caustic or quick-lime may result from the decomposition of the carbonate of lime. I have indeed found quick-lime in commercial plaster; whether it often occurs therein, and to what extent. I cannot say. Its presence would perhaps account for the ill success of some in fixing ammonia with help of gypsum, for, as is well known, caustic lime expels ammonia from all substances that contain it.

What crops are benefited by plaster?—It were not difficult to find authentic cases of plaster having proved useful on almost every field crop, and there is no lack of instances in which it has failed on every one. But the loose way in which the statements of farmers are often given to the public, makes many of them of little or no value. It is a well recognized fact that circumstances alter cases; when we know the circumstances we can understand the difference in the cases. Usually in the records of experience and experiment, which we find in the papers, so few *circumstances* are taken into the account that we are actually no better enlightened at the end of the story than before; there is no making out the *case*. This is especially true of the statements with regard to plaster, and hence we find contradiction upon contradiction, and contradiction contradicted. It is not that statements do not contain the truth; they may contain nothing but the truth, but they rarely include *the whole truth*. This is not at present to be entirely helped, but there is vast room for improvement. In attempting therefore to give a summary of the results of practice in the use of gypsum, it is only possible to assume as facts those statements which have been confirmed by the according voices of many observers.

It is the result of all experience that plaster is especially advantageous to the cultivated *leguminous plants*, viz: clover, lucerne, esparsette, vetches, peas and beans. Its effects upon clover, in particular, have been remarkable. European writers assert that to gypsum is largely due the introduction of clover into agriculture, and the many improvements that have followed its cultivation.

On other crops it seems to be beneficial only by way

* Schubert of Clover-field, so knighted by Joseph I., on account of his merit in extending the cultivation of clover.

of exception, and yet the exceptions are numerous and often striking. After the above specified plants, tobacco, cabbage, rape, hemp, flax and buckwheat, are mentioned by GIRARDIN as benefited by plaster. All writers agree that grain crops are rarely influenced by it. In the United States gypsum has been reported useful on almost all crops. It is a favorite application to meadows. Prof. NORTON used to mention the case of meadows near Springfield Mass., on which the mere application of a few bushels of gypsum (2 to 3 bushels if I remember rightly,) per acre, ensured a good yield of grass, where otherwise the growth was very inferior.* It is also very common to apply a handful of plaster to each hill of corn and potatoes at the time of planting, or when the plants are some inches high—how often profitably, we have no means of knowing. It has indeed been found useful on wheat.

There is obviously need of new trials *on every kind of crop.* We may reasonably hope one day to learn under what circumstances plaster can be useful, even to those crops for which it is not usually recommended.

Undoubtedly those conditions which cause the occasional failure of plaster to benefit the leguminous plants, are closely related to those which make it more generally unreliable when applied to other crops, and the conditions that make it generally useful to the former, make it sometimes valuable for the latter.

What part of the plant is most developed by plaster? With regard to this question, experience answers that the increased development of a plant consequent on the use of gypsum, is disproportionately great in the *stem* and *foliage:* the production of *seed* is not greatly increased. This observation stands naturally connected with the fact that plaster is most efficacious on those plants used for fodder, which yield a large mass of vegetation, and least valuable on the grains which are cultivated mostly for their seed. Tobacco and maize, which have much foliage and stem—potatoes which develop much foliage under cultivation, and produce fleshy tubers and little seed, are further examples. A few experiments are on record, in which plaster applied to peas, produced a decided increase of straw, but hardly affected the amount of seed. STOCKHARDT however, says that the seed-production is usually increased, though not proportionately to the straw.

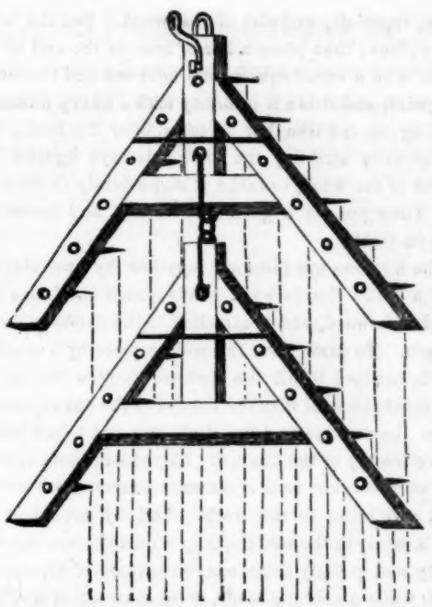
The effect of gypsum on the quality of the plant. Whether crops which have attained a larger growth in consequence of the use of gypsum, contain a larger proportion of sulphuric acid and lime than similar crops produced by the same soil without plaster, is not yet fully ascertained, since experiments made to determine this point have not agreed in their results. New investigations would easily settle this matter, one very important for the theory of the action of plaster.

It is well known that peas often refuse to cook soft, even after hours of boiling. The reason of this is not at all understood. It has been asserted that manuring the crop with plaster, gives the peas this quality; but the contrary is also asserted. This is a point to be studied. (*To be continued.*)

* Will some one who knows cases of this kind, communicate the same to the Country Gentleman?

Hanford's Harrow.

MESSRS. EDITORS—I noticed in the *Country Gentleman* of March 1st, a request, by L. E. M., that some of your subscribers would give him the dimensions of the Geddes Harrow. I cannot give him its dimensions, but I can give the dimensions of one of my own constructing, that after one year's trial, I can say is a good one, and one that obviates some of the objections raised against the Geddes harrow. Mine is two V harrows, attached one behind the other, and about eighteen inches apart, as represented in the accompanying



cut. The frame should be made of three-by-four white oak scantling, but second growth white ash, or very solid blue soft maple will answer, when it is desired to have them as light as possible. The forward harrow is made with a centre piece framed into a brace, and is two feet one inch from the forward tooth to the inside of the brace; the brace is framed into the side pieces or wings on either side, and forward of the *three* back teeth. The wings are *five feet five inches*, from the forward to the hind tooth, containing five teeth in each wing, and one forward in the centre piece, and *six feet three* inches across the hind teeth. The hind harrow is made in the same manner as the forward one, except that the brace must be placed farther back, and forward of only two hind teeth on each side, and the wings are *four feet ten and a half inches* from the centre of the middle piece to the hind tooth, with five teeth in each wing, but none in the middle, and set in such a manner as to exactly divide the space between the forward teeth, and mark three and three-fourths inches from centre to centre of the furrows of the teeth, the outside teeth of the hind harrow marking within the outside teeth of the forward one. The wings are united to the middle piece, and secured by a band shrunk on far enough back to make it solid, and to receive a half inch screw bolt through the wings and middle piece forward of the band, and the nut turned up snug.

The teeth should be made of $\frac{3}{4}$ iron, unless the ground on which it is to be used is quite rough and stony; then perhaps $\frac{7}{8}$ iron should be used; they should be about eleven inches long, and the top end should be made dovetailing nearly the thickness of the frame down to a size to receive a burr, and a good screw cut on it, so that when drove the end of the tooth will come the thickness of the burr above the frame. The holes should be bored with a bit just the size of the screw on the top of the frame, and the under side beat out with a chisel, to exactly fit the tooth, but not too

large, especially endwise of the wood. Put the tooth in its place; then place a bar of iron on the end of the tooth, with a small square hole near one end to receive the point, and drive it in firmly with a heavy hammer, striking on the iron bar by the side of the tooth, and occasionally striking the tooth sideways against the grains of the wood, to make it stand firmly in its socket. Then put on a good iron washer, and screw the burr on tight.

The harrows are fastened together by two clevises and a link; the forward clevis clasps the brace and reaches forward, and is attached to the centre piece by the pin. To draw from the middle piece by a common clevis, inclines to lift the forward harrow too much, but should be used with one similar to the one represented in the cut, placing the draft one and a half inches above the top of the harrow. This causes them to draw flat, or swim fair, as it is sometimes termed, while they hold each other to the work. And by means of the clevis joint, in the middle, they adjust themselves very easily and quickly to an uneven surface of almost any kind, while a sod, or a stone, or an obstruction of almost any kind, can scarcely get more than one wing from the ground at a time.

It is light of draft, and easily handled, or transported, weighing, as mine does, but 160 pounds, or 80 each. I am satisfied from using it, that it will do more work in passing over the ground once, than any common single harrow that I have seen work, will with the same number of teeth, in passing over the ground twice. I would not wish to disparage the Geddes harrow; it is a good one, and a great improvement on the old instruments; but there are some objections raised against it, some of which I think are obviated in mine. Some of the objections that have been made to it are these: If a sod, stone, or any obstruction, passes under one of the forward wings, it raises both wings on that till it has passed over; then again when the back wing meets the same obstruction, both wings on that side are again raised until it is passed over by that wing. In passing lengthways of a ridge, the joint in the middle allows it to adjust itself to the shape of the ground very handsomely, but in passing crosswise of ridges, or over a hollow it being stiff longitudinally, it cannot shape itself to the shape of the ground, and can touch only the tops of the ridges. Or if an obstruction passes from the nose under the center of the harrow, it immediately raises up the middle, causing it to rest on the extreme ends of the wings, while it passes in this position, some five to nine feet, the length of the middle pieces, and the obstruction. But I am satisfied that any person, using this or many other kinds of the improved harrows of the day, will never wish to return to the slow and clumsy instrument of former times.

I do not claim any patent for my harrow, but wish that all should be benefited by its use. But will claim the right of dictating the terms of constructing, so far as to say that if any man shall desecrate, or prejudice the public mind against, or hinder the general usefulness of so valuable an implement, by constructing a bungling, awkward and unsightly instrument, he shall be liable to the discountenance of the friends of good tools, and to the everlasting execration of those that use bad ones. WM. B. HANFORD. *Walton, N. Y.*

Seymour's Drill and Broadcast Sower.

EDITORS OF COUNTRY GENTLEMAN—I was not a little suprised in reading an article in your most valuapaper of the 24th inst., from the pen of L. G. NORTH—to think that a man who reaps annually one hundred acres of wheat at an average cost of about seven or eight shillings per bushel, and has a face to take twenty shillings per bushel for it if the market afford shim an opportunity of so doing,—who grows his large fields of corn at an average cost say of 25 or 30 cents per bushel, and without remorse of conscience takes 100, 200, 300, or even 400 per cent. advance on it—who grows all his other crops and markets them in like manner, and that too without comparatively any expenditure of thought or application, should so deliberately censure an inventor who has spent many precious years of study and diligent application,—who has freely expended time and money to perfect an instrument for the use of Mr. North and others, if perchance he should receive an hundred per cent advance on the actual cost of manufacturing such machine.

I happen to know Mr. SEYMOUR, the inventor and patentee of Seymour's Grain and Garden Drill and Broadcast Sowing Machine, and for the last fifteen years have lived a near neighbor to him, and can assure Mr. North that for fifteen years Mr. Seymour has studied day and night, and expended his means in perfecting these most desirable farming instruments, and presents them to the world unequaled by any other machines for the purpose for which they were intended. Had Mr. Seymour abandoned the idea of perfecting that machine, when it was first conceived, and given the same application to tilling the ground, that he has to perfecting grain drills, he would to-day with ordinary prosperity, be worth ten dollars where he now is one, and our friend North and others might to-day have been using the imperfect drills of 1840.

In reply to the inquiries of Mr. North, I would say that very many farmers, who sow annually from 15 to 30 acres, in sections where these machines have been introduced, and where the economy of using them has been best understood, deem it not only *prudent* but highly necessary to own these machines. The saving in the amount of seed required, when it is drilled in, compared with that necessary when sown broadcast—the saving in the labor of fitting the ground (as the drill itself acts as a cultivator,) and the certainty of having the seed so placed in the earth as to secure speedy and certain germination, are each and all deemed sufficient reasons for its being *prudent* to own and use a drill. These remarks hold equally true with regard to wheat, oats, barley, buckwheat, peas, or any and all grains. E. M. BRADLEY. *East Bloomfield, N. Y.*

The Hunter Weevil.

Solsville, Madison Co., N. Y., May 27, 1855.

Mr. Tucker—Enclosed, I send for your inspection, three insects, which I have never noticed before this spring; yet it is probable that they are well known to those who are better accquainted with the insect tribe than myself. These insects or bugs are committing great depredations upon the young corn. I have had two acres nearly destroyed in four days; and the same insects are at work in other fields in this place. They commence at the top of the stalk or leaf, and eat it to the ground, and often to the kernel. They are a very hard shelled insect; and we often find from three to six in a hill. They show no repugnance to salt or ashes; but are somewhat shy of lime. My object in writing to you, is, to ascertain if you are acquainted with this insect, and know of any thing that will *satisfy their rapacity, that is of less consequence than corn.* They will clear a field of young corn with wonderful rapidity. The wire worm and the cut worm are slow when compared with this insect. J. W. Lippitt.

We enclosed Mr. L.'s letter and insects to Dr. Fitch, who has favored us with the following reply, in which the name and history of the insect are given.

Mr. Tucker—The insects from Madison county, sent you by Mr. Lippitt, are a species of true *weevil*—very different from the wheat midge, which, most unfortunately, in our country, in common conversation continues to be called a weevil. This name, *weevil*, belongs only to very hard insects of the beetle kind, whose heads are lengthened out into a long, slender snout, giving them some resemblance to a miniature elephant with its trunk hanging downwards in front; and their horns or antennæ are elbowed, resembling a flail, like those of ants and bees. All true weevils may readily be known by these marks. They are among our most injurious insects, and hence will be often spoken of, and it will always lead to confusion and mistakes if we call other insects by this name. And I coincide with the Hon. Geo. Geddes in saying, whenever a correspondent applies the name weevil to the wheat midge, it is the duty of our agricultural editors to strike out this erroneous name and insert the correct one, or enclose it in a parenthesis following the false name, until this glaring error is rooted out of our community.

This particular species of weevil was first described by Mr. Say, in a tract upon the insects of this family, which he published at New Harmony, Indiana, in the year 1831. He gave it the specific name *venatus*, which is a Latin word meaning *huntiug*, probably from the circumstance of his finding this insect wandering about in fields and forests, without appearing to be attached to any particular plant as the members of this family generally are. And it pertains to the genus named *Sphenophorus* by the Swedish entomologist Schonherr—which name is compounded from two Greekwords, implying *wedge-carrier*. The body of these insects has some resemblance to two wedges, the heads of which are placed together, with the points in opposite directions, being broadest in the middle and tapering towards both ends. Thus the correct name of this insect is *Sphenophorus venatus*, or the Hunter Weevil. It is a little over a third of an inch long, of a black color, the thorax with elevated smooth spots, between which are coarse punctures appearing as though filled with dirt, and on the wing covers are similar though still coarser punctures, placed in rows upon fine impressed lines which run lengthwise, and are alternated with rows of finer punctures. These coarse punctures and the smooth spots on the thorax can be discerned by the naked eye; but most insects are so small that a magnifying glass is required for their examination, an instrument which costs but little, and which no intelligent farmer should be without, as it gives him such an amount of interesting and valuable information upon a multitude of things pertaining to his vocation.

I am not aware that any account of the habits of this weevil has ever been published. About the middle of June, 1847, a farmer from an adjoining town brought me several of these insects, saying they had nearly destroyed a field of young corn of his, sometimes eating up the young plants entirely, in the manner stated by Mr. Lippitt, but in other instances merely gnawing a hole in the leaf, causing it to wither and die, from which circumstance he supposed there might be something of a venomous nature in the bite of this insect. As most weevils feed upon the ripened grain and seeds of plants, I could scarcely credit the statement which was given to me; but on going into the cornfields in my own neighborhood, I found numbers of this insect, destroying the young corn which it attacked, in the manner represented. I continued to notice it among the corn, until into the month of July. My attention has not been directed to this insect, since that time; but it can probably be found every year, in our fields of young corn; and when from any cause it becomes excessively multiplied, as it now is in parts of Madison county, as we are informed by Mr. L.'s letter, it will undoubtedly do great injury. It is a common insect, for I have frequently found it around the edges of stones in pastures, under the fallen leaves in groves, and among the dirt in gardens, from the month of March until July.

It is doubtful whether by lime or any other substance this weevil can be "doctored" away from the corn. But, as it is so large an insect as to be readily perceived, and so sluggish in its motions that it makes no effort to escape, "hand picking," as it is termed in England, will probably prove the most efficacious if not the only reliable resort, to save the corn crop from its ravages. And this is work particularly suited to the taste of children. Let these be furnished, each with a bottle half filled with water into which to drop and drown these insects, and probably for a few shillings reward, they in any neighborhood can be procured, to pass along every row of corn in the field, and pick up every insect that can be discovered. And the poultry will probably feed with avidity upon the insects which are thus gathered. Yours truly, Asa Fitch. *Fitch's Point, East Greenwich P. O., Washington Co., N. Y., June 4th*, 1855

Inquiries and Answers.

AMERICAN ARBOR VITÆ.—*R. H. Davis, Greene Co, Tenn.* The leaf of the plant sent appears to be that of the *American Arbor vitæ*, (*Thuja occidentalis*) modified perhaps slightly by the locality of its growth. [The answer to this inquiry has been unintentionally delayed a few weeks]

EARLY PEARS.—*R. B. T.* The six best summer pears, affording a succession of six weeks, are Madeleine, Summer Doyenné, Osband's Summer, Gifford, Rostiezer and Tyson. The Bartlett immediately follows these. On some soils, substitute Bloodgood for Osband's Summer. The Brandywine, Ott, and Moyamensing are new Pennsylvania varieties, not sufficiently proved north.

EARLY BEARERS.—*V.* The following varieties of apples and pears come early into bearing, and are therefore well adapted to planting a new place.

Apples. Red Astrachan, Sops of Wine, Late Strawberry, Lowell, Oldenburgh, Dyer, Porter, Baldwin, Jonathan.

Pears. Julienne (takes the lead for early bearing, of all others.) Bartlett, Washington, Dearborn's Seedling, Madeleine, Buffum, Onondaga, Howell, Summer Doyennè, Oswego Beurre, Passe Colmar, Easter Beurre.

TRANSPLANTING STRAWBERRIES.—*S. N. Moore.* Next to setting out strawberry plantations early in spring, which is best for the northern states, plants succeed best when transplanted just after the bearing season. Their strength having been spent in producing a crop, they are nearly stationary at this period. Young plants should be chosen, and old ones avoided; the *larger* leaves should be removed, the roots dipped in mud, the plants settled by water when out, mellow earth should then be drawn over the wet soil,—and a mulch of manure two inches thick spread about them. Unless the weather is very hot and dry, they will need nothing more, and grow well, becoming well rooted before autumn.

B. M. B., Mossy Creek, Tenn. We cannot say whether it will pay to draw out the muck. It depends on its composition, the value of other fertilizers, and the price of the produce. It would cost you but little to try what effect it has on your soil. You might compost it with the green coarse grass and weeds which appear to be so abundant: a layer of grass and weeds and a layer of the dry muck. The heap would ferment; ammonia and carbonic acid would be generated; the ammonia would neutralize any acid the muck might contain, and the carbonic acid would have a tendency to liberate and render fit for assimilation the inert mineral matters.

MARL.—*E. Link, Greenville, Tenn.* It is impossible to judge of the value of your marl without an analysis. It may contain organic matter, some phosphates, soluble silicates and other salts of much manurial value, or it may be composed principally of carbonate of lime and alumina. In the former case it could hardly fail to prove beneficial to any ordinary soil, in the latter it would have a beneficial mechanical effect on light soils, and the carbonate of lime would furnish a permanent source of lime for the plants.

W. E. Woodward. Guano is best applied in a liqnid state to a garden, but it may be dug or plowed in, early in the spring, with advantage. 500 lbs. per acre is a good dressing.

POUDRETTE.—*James O. Miller, Jr.* We know of no method of profitably converting nightsoil into good portable poudrette. The method of using it is the one you mentioned—making it into composts on farms adjoining the city. We are unable to state the best means of conveying it to the compost heap. Will some of our readers who have had experience inform us. We question whether saturating it with copperas, mixing it with charcoal and then drying it,can be done profitably. It is, however, a subject well worth investigating, and we hope you will succeed. We shall be pleased to hear from you, whether you do or do not find the business profitable.

WINTER PASTURAGE.—I would gladly learn from those who know, the particular qualities of Rye and Barley for pasturage and for food in the straw. Our winters are very open and mild—land as rich as we desire it. What I mean is the best grain for winter pasturage. I have the Egyptian oats; they do well for hogs. Would not rye be a quicker, hardier growth, and barley a much sweeter one for stock? F. F. GILSUM. *Matagordas, Texas.*

Rye is usually considered a better crop for winter or early spring pasturage than barley or oats. We cannot tell how either of them would do in your climate. Multicole rye is the best variety for winter pasturage. In open winters it will afford considerable food late in the fall and early in the spring, and is said to produce a good yield of seed afterwards. Would not Italian rye-grass be better adapted to your climate and requirements? If the climate is suitable it will furnish as much winter food as any other plant we are acquainted with.

MOVABLE FENCE POSTS.—In the Co. Gent. I see that one of your subscribers wishes to know how a post may be set in stony land where the holes cannot be made more than six inches deep. There is some fence made by one of our planters, by taking plank 2 inches thick by 18 or 20 wide, sawing it off the length desired for height of fence. Then splitting it with saw from within 4 inches of one edge to within the same distance of the opposite edge at the other end. By putting the wide ends and straight edges together, a broad base is obtained, say 30 inches across. Nail 2 strips of plank across, and you have a good supporter for either plank or railing, and not more timber in it than in a six inch square post, and it has this further advantage, it can be readily removed and set up at another place, being set upon the surface. F. F. G. *Matagordas, Texas.*

ROPY CREAM.—Will you or some of your correspondents be so good as to furnish an explanation of the cause of cream becoming *ropy* at particular seasons?

GUANO, BONES AND LEACHED ASHES.—Which of the following manures are the cheapest at the prices set to each, taking into the amount durability and present advantages—Leached ashes, at 15 cts. per bushel; bones at 50 cts per bushel, or guano at $50 per ton? to be applied on land the soil of which is a mixture of loam, sand or gravel. N. J. *North Lyme, Con.*

Leached ashes are a valuable manure for wheat,—judging, not from their composition but from their effects. In Western New York we have seen leached ashes benefit wheat on land where unleached ashes had little or no effect. We can give no satisfactory explanation of this phenomenon. It *may be* that the potash and soda of the unleached ashes are replaced in old leached ashes by ammonia, obtained from rain and the atmosphere. At present we are very ignorant on these subjects, and *deductions* and speculations are hazardous in agricultural science. But even should ammonia, to some extent, replace the potash and soda of the ashes, we can hardly suppose there would be *sufficient* of ammonia and other fertilizing elements in the leached ashes to make them worth 15 cents per bushel, if their value is confined simply to the supply of actual constituents of the plants. We believe on Long Island leached ashes are used as a manure for corn at a higher price than that named, and it may be that they have a beneficial mechanical action on these light soils which increases their value as manure.

The comparative value of bones and guano is one of the vexed questions of agricultural chemistry. Without, at this time, assigning the reasons for our opinion,

we believe that one ton of good Peruvian guano is worth more than two tons of the finest bone dust or three tons of crushed bones. We should therefore, at the prices named, take the guano in preference to the bones or ashes.

FREEZING OF SINKS.—I wish to know if there is any possible way to prevent sinks from freezing up in the winter, in rooms where there is no fire. Ours has been frozen up 2 or 3 months this season, which makes it quite inconvenient. If you or correspondents will please answer the above through the Cultivator, you will oblige A SUBSCRIBER. *Elliot, Me.*

There is no way to prevent water from freezing, when exposed to a cold temperature—this is the unalterable law of nature. But there are easy, as well as difficult modes of thawing it out. When the discharge pipe of a sink becomes filled with ice, which is, we suppose, the difficulty our correspondent speaks of, procure a lead pipe of suitable length, and solder a small tin funnel into one end. Set the other end on the ice in the discharge pipe, and pour boiling-hot water into the funnel. It descends the lead tube, and striking directly on the ice, thaws it with great rapidity, the lead pipe settling as fast as the ice gives way. Ice may be removed from a pump or other tube in this way, in an almost incredibly short time—a few minutes will clear out several feet. The lead pipe with its funnel may be laid aside, when done with, for future use. If a sink becomes occasionally frozen, it becomes a very light task to remove the ice in this way.

BLACK ANTS.—My yard and flower garden are much infested with black ants, to the no small annoyance of our household department, and the destruction of many bulbous roots and choice shrubs. Can you or any of your contributors, inform me how they may be destroyed, or be made to change their quarters. O. C. G. *Ohio.*

We have been troubled but little with black ants and should be glad if some of our correspondents would answer the above. How would it do to pierce the ground with a smooth crow bar where the ants are most abundant. Will they not fall into the holes and be unable to get out? A little hot water poured into the holes would make short work with the prisoners. It is said that tomato plants are offensive to them, and that the surplus plants laid where the ants frequent will cause them to retreat. Whether all the different species would be similarly influenced, is another question.

A CELLAR ABOVE GROUND.—I am so situated that I cannot have a cellar. Can you or any of your correspondents inform me how to make a building about 10 feet square that will protect from frost in winter and heat in summer. Also do you know of any work of importance on the raising, propagation and cultivation of ever-greens, where can it be obtained, price, &c. J. FORD. *Princeton, Ind.*

Will some of our correspondents answer the above.

PIPES FOR WATER.—I have a spring, elevated 60 feet above my house—distance 70 rods. Would tile, enclosed in cement, say 1 to 2 inches thick, be likely to bear the pressure—the tile being 3 inch (the water to be taken from a reservoir.) We conclude that edi tors are bound to know every thing, and if you could answer my question you will confer a favor upon H. M

There will be no difficulty in bringing the water as proposed, provided the water runs simply down the slope, and the pipe is subjected to little or no pressure from a head of water—on which we are not informed. A three-inch pipe has 108 square inches of surface for every foot in length, consequently the pressure on each foot (a column one inch square and two and a half feet high weighing about a pound) would be 108 pounds for every two and a half feet of head, 216 lbs. for five feet, 432 for ten feet head, and so on. We are not able to say what amount of pressure the three-inch pipes encased in well hardened cement would be likely to sustain safely. The smaller the pipe, the less would be the pressure; a one inch pipe for instance, presenting only one third of the surface, would be subjected to only one third of the strain required for a three inch pipe.

LONG-ROOTED CLOVER.—The "long-rooted clover," inquired about, in a late number, is the Hungarian or or Turkish, and is called "Esparcette." It is said to last for several years, and bear cutting two or three times in the season. Col. Benton spoke of it in his discourse at New-York on the Pacific Rail-Road, as growing wild at the foot of the Rocky Mountains, and being there used for Swine.

STEAM FOR THRESHING, &C.—Has Steam Power ever yet been used in our country in Barns for threshing, &c.? If so, which engines are the best, where can they be had, and at what cost? H.

SCOURS IN COWS.—Several cows have died this spring in this vicinity of what is called the 'scours.' Do you know of any sure remedy? The stomach of one that was opened appeared all in a foam. E.

LIME FOR THE WHEAT MIDGE.—DANIEL THOBURN, St. Clairsville, Ohio, writes: "Our crops never were more promising than this spring; an abundance of fruit, and everything the farmer can desire. One thing alone we dread now, the weevil (midge.) The wheat is just shooting, and as we suffered some last year from this little enemy, it is pretty generally expected that it will again visit us. Would the sowing of slacked lime on it when in bloom be a preventive?"

We are unable to answer this inquiry, and give the following, which has been going the rounds of the papers, for what it is worth. We should be glad to hear from any one who has used it successfully or otherwise.

We are informed by Mr. Chamberlin, of the City Mill, that the farmers of Vermont are in the habit of heading the movements of the weevil (midge) by a very simple process. The season after it makes its appearance they go through their wheat fields, about the time the wheat is heading, immediately after a shower or while the dew is on it, and scatter newly slacked lime broadcast, so that it will adhere to the heads and stems of the grain. They use about a bushel to the acre.

Good lime should be secured, and slacked by sprinkling a little water over it, so as to retain all its strength. A paddle may be used in scattering it. The remedy has, it is said, been so effectually tried, as to leave no doubt of the result

Strips in large wheat fields left untouched by the lime, for experiment, have been entirely destroyed by the weevil (midge,) while the grain on each side was all saved.

Since this intelligence was received, Mr. Jesse Allen, of the Centre Mill, has received corroborating information from a Muskingum county farmer, who had seen the same practice and the same results there.—*Akron (Ohio) Beacon.*

POUDRETTE.—Having seen an advertisement from the Lodi Mrnufacturing Company, of an article called "Ta Few," or dried night soil, may I beg you will state in the Country Gentleman, whether you know of any practical farmer having used such and the result. It is stated that 4 lbs. is equal to 3 lbs. guano. A SUBSCRIBER. *Chatham, C. W.*

We know nothing of the manure referred to above, farther than what is stated in the advertisement; but from that should infer that it would prove valuable. If any of our readers have tested its value, we should be glad to know the result.

WINDMILL FOR RAISING WATER.—I have a friend that wishes to buy a windmill for raising water for cattle. Will you please inform me where they can be had—price, &c. S. G. CLARK. *Jamestown, Mercer Co., Pa*

Management of Dairy Stock.

A gentleman of some celebrity and success as a dairy farmer, was lately requested by the Council of the Royal Agricultural Society of England to supply information regarding his mode of feeding and managing cows for dairy purposes. In reply to this request, Mr. HORSFALL sent to the Society, during the month of May of this year, quite a lengthy communication, which contains abundant evidence of his being a most judicious manager in that department of farming to which he has particularly directed his attention. The communication made by this eminent dairy farmer to the Royal Ag. Society, is too long, and too full of details of little interest or utility to those engaged in dairy business in this country, to admit of its being transferred as it is to our columns; but the more interesting and instructive portions of that communication, so far as applicable in this country, will be found in the abstract of it which is herewith given.

Mr. Horsfall commences his report of his mode of management with his dairy stock, by saying that he had found it stated on good authority, that store cattle of a fair size, maintain their weight and condition for a length of time when supplied daily with 120 lbs. of swedish turnips and a small portion of straw, and that the experience of a district in Yorkshire, where meadow hay is the staple food during winter, shows that such cattle maintain their condition on 33 lbs. of such hay, each per day. These respective quantities of turnips and of hay correspond very closely in their nutritive properties, containing a very similar amount of albuminous matter, starch, sugar and phosphoric acid.

These same quantities of food, or their equivalents, if supplied to cows in milk, and of the same size, will be found insufficient, as the cows will lose perceptibly in condition. This is easily explained when we find their milk rich in substances which serve for their support when in store condition, but going to the formation of milk when kept for dairy purposes. Even the accumulated stores of flesh and fat on a milch cow seem to be drawn upon, and converted into components of milk, casein or butter. Dairymen near large towns, where fodder is higher than in rural districts, and where the dairy produce is disposed of in new milk, take advantage of the fact just stated. They prefer altogether cows in *high* condition when they purchase them, finding that their stores of flesh and fat will serve to be converted into milk at a cheaper rate than by purchasing fodder. They supply their cows with sloppy food, more adapted to induce quantity than quality, and when the cow has lost greatly in condition and is no longer profitable, she is sold to purchasers in farming districts where food is cheaper, to be fattened again for dairy purposes or for the butcher.

But when cows are kept mainly for the production of butter, for which poor milk is not adapted, the food of such cows must be that which is best adapted for an abundant supply of the product wanted. With a view to determine the kind of food best adapted for the production of the best quality of butter, Mr. H. was led to give attention to the chemical composition of milk. From several analyses, he has come to the conclusion that, taking a full yield of milk, 4 gallons a day, which will weigh upwards of 40 lbs., there will be, on an average, of dry or solid material 5.20, consisting of

	lbs.
Pure Casein,	2 00
Butter,	1.25
Sugar,	1.75
Phosphate of Lime,	0.09
Chloride of potass. and other mineral ingredients,	0.11
	5.20

In endeavoring to supply abundant material for these, by furnishing their elements in the food, Mr. H. found that turnips are objectionable on account of their flavor, which has led him to use them but very little for his dairy stock, and to use, in moderate quantities, instead of them, cabbage, kohl rabi, and mangold wurzel. If hay alone were to be used to supply the constituents of a full yield of milk, it would require an addition to the quantity needed for bare maintenance, so large, that no cow could be induced to consume it.

Finding that he could not use hay and turnips in such a way as to keep his dairy cows in good condition, and also to furnish them with an ample supply of the elements of milk for the production of butter, Mr. H. sought the aid of such substances as are rich in albumen, oil, and phosphate of lime, paying regard to their comparative cost with a view to profit. He thinks that nitrogenous and other substances have a higher value for special than for general purposes, and that this adaptation of materials characterized by peculiar properties, has not yet gained the attention to which it is entitled. After repeated trials to ascertain the kind of food best adapted to produce a full supply of milk, rich in butter, in addition to keeping his cows in good condition, Mr. H. has adopted the plan which follows, and which we give in his own words:—

"My food for milch cows, after having undergone various modifications, has for two seasons consisted of bean straw, oat straw, and shells of oats, in equal proportion, rape cake 5 lbs., and bran 2 lbs. per day for each cow. These materials are blended together, moistened, and well steamed; they are supplied three times, *ad libitum*, per day in a warm state. The attendant is allowed 1 lb. to 1½ lb. per cow, according to circumstances, of bean meal, which he is charged to give to each cow in proportion to the yield of milk, those in full milk getting 2 lbs. each per day, others but little; it is mixed with the steamed food on its being dealt out separately; when this is eaten up, green food, consisting of cabbages from October to December kohl rabi till February, and mangold till grass time. With a view to nicety of flavor, I limit the supply of green food to 30 to 35 lbs. per day each. After each feed, 4 lbs. of meadow hay, or 12lbs. per day are given to each cow; they are allowed water twice per day to the extent they will drink."

As some of the materials used by Mr. H. are not in common use as food, he annexes some remarks on what he regards as their distinctive properties.—*Bean straw* uncooked, is dry and unpalatable, but by the process of steaming it becomes soft and pulpy, emitting an agreeable ordor, and imparting flavor and relish to the mess. It should be cut on the short side of ripe-

ness, which it may be without interfering with the plumpness of the bean. Mr. H. obtained from Professor Way, Chemist to the Roy. Ag. Society, an analysis of some bean straw grown on strong and high-conditioned land, which analysis shows a per-centage of—

Moisture,	14.47
Albuminous matter,	16.38
Oil, or fatty matter,	2.23
Woody fibre,	25.84
Starch, Gum, &c.,	31.63
Mineral Matters,	9.45

In albuminous matter, which is especially valuable for milch cows, bean straw has nearly double the proportion contained in meadow hay. *Bran* also undergoes a great improvement in its flavor by steaming, and it is probably improved in its capacity of being readily converted into nutriment. Bran contains about 14 per cent of albumen and is peculiarly rich in phosphoric acid, nealy 2 per cent. of its whole substance being of this material. The properties of *rape-cake* are such as will cause it to be more highly valued than it has ever hitherto been for dairy purposes, if the opinion of Mr. H. in regard to it be not altogether too high. It contains nearly 30 per cent. of albumen and is rich in phosphates, and also in oil. The objection made by some to it on account of its flavor, Mr H. has overcome by his mode of preparing it by steaming, &c. The cattle do not refuse it ; and the flavor is not at all perceptible in the milk or butter.

During the month of May, Mr. H. turns out his cows on a rich pasture, housing them at night, and supplying them with a mess of the steamed mixture and a little hay, morning and evening. From June to Oct., mown grass is given instead of hay, in addition to what they get in the pasture, and also two feeds of the steamed mixture. This is continued to Oct. when the cows are again wholly housed.

With such treatment Mr. H.'s cows usually give from 12 to 16 quarts (Imper.) of milk per day, and keep in good condition at the same time, for abont 8 months after calving. Then they usually fall below 12 quarts, and gain several pounds every week in fat and flesh.

Another advantage or element of profit, is the richness of his manure from cows so fed. His pasture lands are yearly improved, and not impoverished. The average amount of butter from every 16 quarts of milk is 25 ounces. From this and former data the produce of his cows in butter may be readily acertained by any one dubious about the profits of this extra expense in feeding.

Cure for Warts.

I noticed some time since, that a subscriber in the Country Gentleman wished to learn how to cure warts on the head of a steer. I can tell him how to cure them on his own hands or those of his neighbors. Some years since, I had some large fellows on my own hands, and the manner I got rid of them, was to pare the top off with a keen edged knife or razor, until they bled a very little ; I then applied fine salt, and let it dry with the blood ; in a day or two perform the same operation again, and so continued doing until I got them down to the surface of the skin. They have never appeared since. Now if salt cured them on my hands, why won't it do so on cattle's heads? J. M. Jessup. *Matherton, Mich.*

Early-bearing Varieties of Fruits.

The inquiry is sometimes made why certain varieties of fruit trees bear while the trees are quite young while others prove tardy in this respect. It is sometimes attributed to the difference in natural thriftiness. The Northern Spy, it has been asserted, comes late into bearing in consequence of its rapidity of growth. But this reason, if correct, should apply to other sorts, such as the Baldwin, Sops of Wine, Late Strawberry, &c., which are also vigorous growers when young, and very early bearers. Again, the *form* of the tree is said to have an important influence. A distinguished Vermont correspondent of the New England Farmer, argues at some length to show that the Spy is unproductive from the very *erect* shape of the tree. We cannot perceive any uniformity in the application of this rule. The Bartlett pear is one of the most erect in growth, and so far as our experience goes, the earliest of all bearers. The Buffum, Louise Bonny Jersey, Washington, Amire Joannet, and others, are all erect growers and early bearers. There are, it is true, spreading trees which bear soon ; and there are other erect trees which are tardy in fruiting ; but they cannot constitute a rule with so many exceptions.

This quality appears to be a characteristic of certain varieties, like color, size, &c. for which no other reason can be satisfactorily found.

Oil Cake for Cattle.

While upon cattle, could not yourself or some of your correspondents, inform us in regard to using oil cake in fattening steers. How much oil cake should be given at a feed to a steer weighing say eight hundred lbs., and how often? A bushel of corn is equivalent to how much oil cake for fattening purposes? If we know in regard to its value as compared with corn, we could each make our calculations whether it would be more profitable to fatten entirely with corn, or to use a portion of oil cake. By answering the above through the Country Gentleman, you will much oblige Chester Co., Pa.

Some authorities estimate oil cake to be twice and even thrice as valuable for fattening purposes as Indian corn. This we deem a mistake. The estimate was made according to the per centage of nitrogen each food contains. This method of estimation, Lawes' experiments on sheep and pigs, prove to be erroneous. Mr. Johnston, near Geneva, N. Y., who has had large experience in fattening cattle on oil cake and corn, is unable to decide which is best. He thinks that, weight for weight, there is very little difference. We agree with him in this opinion, so far as the fattening value of the two foods are concerned. But one of the profits attending cattle feeding in the older settled states, is the manure produced, and there can be no doubt that the manure made from oil cake is *twice as valuable* as that made from Indian corn. Oil cake, therefore is worth somewhat more as a food for cattle than Indian corn.

Notes for the Month.

To our Agents and Friends.

We beg our friends to remember that, although we take subscribers to THE CULTIVATOR, for the volume only, we can at all times furnish new subscribers with the back numbers, and that we shall be glad to add new names to our list at any time.

☞ Agents who have sent clubs, can add to their number, whether one or a dozen, at the club price; and any one of our readers who will take the trouble to get up a club, can have TEN copies of THE CULTIVATOR and ILLUSTRATED REGISTER, for $5. The circulation of our journals, large as it is, is not half what it should be, and we shall be greatly obliged to all who will aid in extending it.

☞ In answer to numerous inquiries in regard to *Back Volumes of the Cultivator*, we will say that we have on hand the First Series of Ten Volumes (1834—1843) *complete*. Of the New, or Second Series, we have those for 1844, 1845, 1849, 1850, 1851 and 1852; while we have *not* those for 1846, 1847 and 1848. If any of our subscribers are willing to dispose of either of the last three, we will gladly give One Dollar per copy for them.

The *Third Series*, beginning with 1853, we can supply in any numbers; and it offers an excellent opportunity to begin the purchase of a set, to which subsequent volumes may be added, as they appear.

Any of the above volumes, we will now send, as they belong to broken sets, neatly bound and postage *prepaid*, for $1.

A new volume of the COUNTRY GENTLEMAN commences on the first of July, for which we solicit the kind offices of our friends. This paper is constantly increasing in reputation and usefulness, and we believe it is not too much to say that, in editorial ability, in the extent and value of its correspondence, as well as in its mechanical execution, it is unequalled by any similar journal in America.

TERMS—FOR ONE YEAR.

Single copy,	$2.00
Three copies,	5.00
Five copies,	8.00
Ten copies,	15.00

FOR SIX MONTHS.

One copy,	$1.00
Six copies,	5.00
Ten copies,	8.00

For $4, we will send two copies of the paper and two copies of the ILLUSTRATED REGISTER, or LIEBIG'S RELATIONS OF CHEMISTRY TO AGRICULTURE.

ILLINOIS STATE FAIR.—The managers of the State Ag. Society have entered upon the preparations for their State Fair, to be held at Chicago in October, with great energy, and a determination to make the exhibition worthy of the intelligent farmers of this great and flourishing State; and we are glad to see that the several rail-road companies are co-operating with the Society, and affording all the facilities in their power for the accomplishment of the great object in view. We learn by a letter from Dr. KENNICOTT, the energetic Secretary of the Society, that they have secured very favorable and most beautiful grounds for the exhibition, about 2½ miles from the center of Chicago, with abundance of shade and water.

It is announced in the Chicago papers that the President of the State Agricultural Society, has appointed ROBERT KENNICOTT, Esq., to take charge of collecting the specimens in every department of the natural history of the State, to be exhibited at the State Fair to be held in Chicago in October next. Of Mr. Kennicott and his designs the Chicago Press says; —"Mr. Kennicott is known to be a gentleman well acquainted with the subject committed to his charge, and zealously devoted to the cultivation of the science. It is his intention to visit the different parts of the State for the purpose of fulfilling the duties of his appointment, and we have no doubt he will be successful in collecting such a mass of specimens as will astonish many who have never turned their attention to this most interesting department of the productions and resources of our State."

THE ADDRESS AT ELMIRA.—GOV. WRIGHT of Indiana, we are gratified to learn, has accepted the invitation given him, to deliver the annual Address at the ensuing fair of the New-York State Ag. Society. The statement, going the rounds of the papers, that Gen. CASS had been invited to deliver the address, is an error. Gov. Wright is, we believe, more of a farmer than politician, and is one of the most popular speakers in the "Great West."

AGRICULTURE OF MASSACHUSETTS.—We are indebted to C. L. FLINT, Esq., for a copy of "The Agriculture of Massachusetts, as shown in returns of the Ag. Societies for 1854." It is a volume of much interest, abounding with the practical experience of intelligent farmers, and such a work as Massachusetts may well feel proud of.

SHORT-HORNS.—Those in want of this stock, are referred to the advertisement of Dr. WENDELL, who, it will be seen, offers for sale several fine young animals from his herd—among them a couple of bull calves sired by his imported bull Lord Ducie.

GAS-LIME.—A correspondent of the *Gardener's Chronicle* says—"At the recommendation of one of my neighbors I have applied to my lawn, lime from the gas works, mixed with sand and ashes from the kitchen grate, (coal ashes.) From this application I was led to expect a beautiful firm and green surface; but to my astonishment the grass is literally burnt up, and I fear completely ruined. It is the bituminous matter contained in the gas-lime which renders it so injurious to plants. It should be used only in composts of muck, loam, &c. It is indeed questionable whether it pays to use it at all, where lime and plaster are as cheap as in most parts of this country. It contains some fertilizing matter, but the deleterious effect of the bitumen pretty effectually neutralizes it. We know an English gentleman of high scientific attainments who took out a patent for the manufacture of a manure from the refuse liquor of the gas works. He

obtained a manure which Professors GRAHAM, MILLER, WAY, URE, and other eminent chemists, pronounced superior to the best guano, and yet on trial *it was found to injure as much as it benefited the crops* to which it was applied. The ammonia and phosphates were there, and in an available condition; but the bituminous matter which it was impossible to remove rendered the manure useless, and its manufacture we believe is given up.

THE CROPS.—From all quarters the most cheering accounts of the crops are received. They were, very generally, beginning to suffer from drouth, but during the past week copious rains have allayed all fears on this account, and we may reasonably anticipate a bountiful harvest; and with a larger extent of land sown than ever before, with high prices and good crops, what can prevent great agricultural and national prosperity.

PUTNAM CO. AG. SOCIETY.—The Officers for this year, are:

President—THOMAS B ARDEN, Philipstown.
Vice Presidents—Leonard D Clift, Carmel; John M. Towner, Patterson; Coleman Townsend, Kent; James E. Kelley, Southeast; Ezekiel Hyatt, Putnam Valley; H. A. Pelton, Philipstown.
Secretary—G. Mortimer Belden, Carmel.
Treasurer—Saxton Smith, Putnam Valley.

Exhibition to be held at Carmel, Sept. 18th and 19th. Among the prizes to be awarded, are several from a "special fund" contributed for the purpose—one of $50, and another of $20, for the 1st and 2d best treatises on the "Defects in the present system of Farming in our County, and the remedies best suited for the same, and showing how our Farms can be made to produce the largest net income of which they are capable," to be written by a resident of the County, and to be read at the Fifth Annual Exhibition of the said Society.

We should he glad to see this example followed by every county in the state, as we know of no way in which a similar amount of money could be expended with as fair a prospect of so much benefit to the agricultural interest. The offer of such prizes would lead to a thorough investigation of the subject, and though some of the treatises might be of little value, many of them could not fail to prove of the highest importance. The facts collected, the errors pointed out, and the suggestions made, by from fifty to a hundred gentlemen from every part of the state, would give a striking impulse to agricultural improvement.

GREAT SALE OF SHORT HORNS.—The sale by public auction, of Mr. TANQUERAY'S celebrated herd of Shorthorns, came off at Hendon on the 24th April. One hundred head of cattle sold for 7,447 guineas ($37,532.88) thus averaging over $375 each—76 cows, heifers and calves sold for 5,610 guineas, averaging over $372 each; and of these 24 were under 12 months old. 24 bulls and calves sold for 1837 guineas, averaging nearly $386 each, and of these 19 were under one year old.

The highest price obtained was for the six year old cow Oxford 11th, 500 guineas ($2,500) being paid for her by Mr. GUNTER of Brompton. Mr. T. purchased her at Lord Ducie's sale, for 250 guineas. The next highest figure was for the two year old heifer, *Oxford 16th*, bought by Messrs. MORRIS & BECAR of New-York for 480 guineas ($2,419.20.) The three year old bull, Duke of Cambridge, sold for 280 guineas to Sir C. KNIGHTLEY. The yearling bulls Sixth Duke of Oxford and Barrington sold for 200 guineas each; and a five year old cow, Hope, to Mr. L. SPENCER, of New-York, for 200 guineas, and a yearling, Hopeful, for 140 guineas. BECAR & MORRIS were large purchasers; besides the 480 guineas cow, they obtained Minerva 2nd, 180 gs; Victoria 26th, 160 gs; Minervia 4th, 140 gs.; Iris, 90 gs; Surprise, 80 gs.; Delia, 65 gs.; Louise, 34 gs. BROOKS & FULLER, agents for the Livingston Co. (N. Y.) Stock Importing Company, obtained the yearling bull Governor for 60 gs.; and also the two year old heifers Camilla and Dorinda for 52 and 45 gs.

The *Mark Lane Express* says: "The "rage" or "fashion" was almost entirely confined to Mr. GUNTER and to visitors from America and Australia. We believe the high biddings were chiefly if not solely, with these few." The high figures appear to have been confined to the Duchess of Oxford race of Short-horns. "Some of the first cows," says the *Express*, "put up, went at mere butchers' prices; while against these we have certain strains which only appear to increase in estimation every time they are offered. The question arises here, is this esteem or fashion to be justified? We are inclined to believe it is, and that its value will always be recognized as long as it can be traced Nevertheless, few even of our best men, it seems, care to run up to anything like the lengths now attained. It is the export market after all that "makes" these wonderful sales. It was so at Tortworth; and but for this at Hendon, too, Mr. GUNTER would have had it all his own way. One secret of this, however, at least with our American friends, is that they buy in companies—a plan which in the end materially reduces the cost at which a district obtains the use of our best stock."

CHILIAN GUANO FRAUD.—We have received a letter from T. S. PLEASANTS, Esq., the Guano Inspector in Petersburg, and editor of the *Southern Farmer*, in reference to the Chilian Guano Fraud. It appears that Messrs. ROWLETT & HARDY, who sold the Chilian guano, had not the least idea that it was a fraudulent article, that it was consigned to them by a party in Boston whom they believed to be a gentleman of high standing, *and the actual importer of the article*, and that he had sent them an analysis of the Chilian guano which was deemed satisfactory We would give Mr. PLEASANTS' letter entire, but that we had, previous to the receipt of his letter, already in type, (p. 343) the substance of his remarks copied from the *Southern Farmer*. We had no intention of implicating Messrs. ROWLETT & HARDY in this attempt to impose upon the farmers. We did not think our remarks could be so construed as to favor such a supposition.

Messrs. R. & H. are unquestionably honorable and respectable gentlemen, and we fully believe they had no knowledge that the article they were selling as Chilian guano, was a worthless compound. They were imposed upon by Mr. S. of Boston; whether he, in his turn, was imposed upon by other parties, remains to be seen. Mr. S. may be the highly respectable gentleman he has been represented; if so he will doubtless soon follow the example of Messrs. ROWLETT & HARDY, and deny any knowledge of the nature of the Chilian guano. He can and ought to tell us who he got it from, and trace out the fraud to its source. Will he do it?

☞ We learn from the *Scientific American* of of June 2d, that the Messrs. WHEELER of this city, have secured the re-issue of the patent on their long and favorably known Endless-Chain Horse Power. It was originally patented in July, 1841.

BOTS.—Will you, or some of your readers, inform me whether there can be anything done for a horse, when the bots *get so high*, that it is very difficult for the animal to eat or swallow any thing; and what is the general treatment for horses laboring under such precarious complaints?

Any information from some one of your numerous subscribers, would confer a favor on one who has lost a very valuable horse lately. A SUBSCRIBER. *Millbrook, C. W.*

FOR BLIND STAGGERS—Pull out your knife and bleed freely in the mouth as soon as possible. B.

ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS *and Cultivator Almanac for* 1855. Albany: Published by LUTHER TUCKER, at the office of The Cultivator and Country Gentleman.

With an immense variety of useful suggestions on matters connected with agriculture, and illustrated by one hundred and twenty illustrations, the Annual Register cannot but be an acceptable companion for the year to the farmer. Its scientific information will cause it to be preserved, and after a few years the careful agriculturist will find himself in the possession of a valuable library of reference. The plans of tasteful and convenient country residences, and the suggestions for improvement and planting of grounds before the house, will tend to diffuse what has been hitherto too much wanting among farmers, a respect for ornament as well as profit, and a perception of the beautiful in addition to the useful. It is impossible to do more than allude to the various agricultural topics treated in The Register. The methods of transplanting, grafting and pruning fruit trees, dwarf and standard, the best arrangements of farm buildings and implements and the different varieties of stock are very satisfactorily discussed, with copious illustrations. When it is considered that all this can be obtained for only 25 cents, we should think that Luther Tucker and the office of The Cultivator at Albany would be run down by orders.—*New-York Daily News.*

☞ Mr. J. H. Tillotson has enclosed us $1 for our publications, without any date, or giving the direction to which he wishes them sent. Will he let us know his P. O. address?

GUANO ADULTERATION IN IRELAND.—At the last Council Meeting of the Chemico Agricultural Society of Ulster, Dr. HODGES, chemist to the society, gave a statement of the percentage composition, and estimated commercial value of the samples of guano, which had been analyzed in his laboratory during the year. The extent to which adulteration has been carried on, is beyond belief. *More than one half of* the samples analyzed were comparatively worthless. One lot, though it contained 14.68 per cent. of "organic matter and fixed salts of ammonia," was found to contain of actual or potential *ammonia*, less than half of one per cent., and Dr. HODGES estimates its value at £1.6 ($6.24) per ton. We may add that it contained 47 per cent. of carbonate of lime, and about 8 per cent. of salt and sulphates. We are not informed whether it was sold under the name of Peruvian or Chilian guano.

Maclura or Osage Orange Hedges.

H. W. PITKIN,

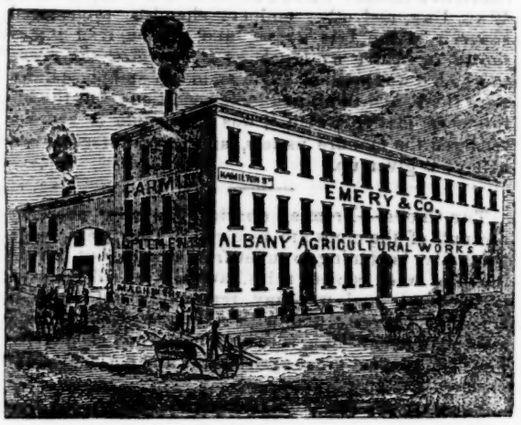
Manchester, Conn., Dealer in Seeds and Plants.

IN consequence of the increasing demand for this remarkable Hedge plant, my exclusive attention is now given to the business. Seed is yearly gathered by my own agents, and may be relied upon as fresh and genuine. As many persons prefer the plants ready for setting in hedges, I have established nurseries in different sections of the country, where they are raised on an extensive scale, and in the most economical manner, and am ready to contract them in any quantity. A descriptive pamphlet on the Culture of Osage Orange Hedges, given to purchasers.

G. G. SHEPPARD, New-York—P. B. MINGLE, Philadelphia—BYRAM, PITKIN & Co., Louisville, Ky., wholesale Agents. Apply as above. April 5—w2m2m

Suffolk Pigs,

OF pure blood, for sale by B. V. FRENCH, Feb 1—m1y Braintree, Mass.



Albany Agricultural Works,

On Hamilton, Liberty and Union Sts.

WAREHOUSE, SEED STORE, AND SALES ROOMS

Removed to No. 52 State Street,

Corner of Green, opposite the City Bank, Albany, N. Y.

THE proprietors of the above named establishment being the sole owners and manufacturers of

EMERY'S PATENT HORSE POWER, &c.,

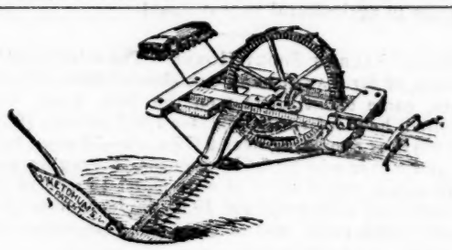
☞ All arrangements with other parties for their manufacture having expired, ☜ have formed a new copartnership under the firm name of

EMERY BROTHERS,

and will continue the manufacture and sale of AGRICTLTURAL IMPLEMENTS and MACHINERY as heretofore, at the old stands of EMERY & Co. By this arrangement the united efforts and interest of the brothers, long known to the public, are secured, and no exertions will be spared to meet the wishes of those dealing in and using the class of implements we manufacture. The public may rest assured, the reputation heretofore earned for our manufactures, shall be fully sustained, by using none but the best material and workmanship; and by a strict attention to business, we hope to merit and enjoy a continuance of the patronage heretofore so liberally bestowed, which we respectfully solicit.

Full descriptive illustrated price catalogues sent gratis on application. EMERY BROTHERS.

Albany, N. Y. June 21—w&m1t



Ketchum's Mowing Machine.

THE subscribers have made arrangements by which they have the exclusive sale of this celebrated Mowing Machine in and for Albany and vicinity. They will furnish them with all the latest improvements, and one extra set of knives, and the fullest warranty to work to the satisfaction of the purchasers, as follows:

For One Horse Mower, $95; for Two Horse Mower $115; with Reaper Attachment, $15 extra.

They also have a limited supply of *Forbush's Mowing and Reaping Machines* on hand, and can furnish to order *McCormick's, Hussy's, Burral's, Manny's and Wright's Reapers.*

All persons desiring *Mowers* or *Reapers*, and who can obtain them from this point, should order them early, to prevent disappointment, as the supply will be limited.

Full descriptive illustrated price catalogues sent gratis on application. EMERY BROTHERS.

June 21—w&m1t.

P. D. GATES,

COMMISSION MERCHANT, and dealer in *Agricultural Implements and Machinery*, No. 12 BROADWAY, NEW-YORK.

☞ Ketchum's Mowing Machines, Hay Presses, Horse Hoes, Cultivators, Plows, Straw Cutters, Corn Shellers, Reapers, Horse Powers and Threshers, Combined Threshers and Winnowers, and other Agricultural Machines.

May 24—m12t*

Emery's New Portable Grating Cider Mill and Press.

ONE great advantage of this machine over all others is, that IT WILL NOT CHOKE UP, and hard, soft or rotten apples can be ground, and yet the cylinder will always remain clear, in grinding order. It will make more Cider than any other Mill and Press, with a given quantity of apples in a given time, and with less labor and expense. It is the best press for Currants, Cherries, Berries, Cheese, Butter, Lard and Tallow. With all these advantages, it is sold at a price that is within the reach of all—warranted superior to any other in use, and fitted for horse and hand power. Price $40.

In next month's number we will give cuts with full description of the working parts of this mill.

Made and for sale at the Albany Agricultural Works, Warehouse and Seed Store, by

EMERY BROTHERS,
52 State Street, Albany.

June 21—w&m1t

Little Giant Corn and Cob Mill.

THE subscribers having made arrangements with the Patentee of the above celebrated Mill for their exclusive manufacture for this State, and their sale generally, offer the same to the farming public on the most favorable terms and warranty. The attention of stock feeders is especially solicited to this Mill, believing it to be just the thing so long wanting for the purpose intended.

Some 2,000 Little Giant Mills have already been sold the past season at Baltimore and Cincinnati alone; and so far as known have given universal satisfaction. Many testifying that their Mills had more than paid for themselves the first month; while others aver the regular use of the LITTLE GIANT for one week will more than save its cost in tolls alone.

This Mill has doubtless attained a more sudden celebrity for doing this work with extraordinary ease and certainty than any other article of labor saving machinery ever presented to the Agricultural world; the merit of which consists chiefly in the peculiar arrangement of first breaking, then crushing and crumbling the cob at the center of the mill.

These Mills are guaranteed in the most positive manner against breakage or derangement, and warranted to grind feed from ear corn, and grits or fine hominy from shelled corn, with a degree of ease and convenience for farm purposes never attained before.

For portability, simplicity of construction, and convenience of use, the Little Giant has no equal. It weighs from three to five hundred pounds, according to size, can be put in operation by the farmer in twenty minutes, without expense or mechanical aid, then adjusted and used with convenience by any body. Made and for sale at the

Albany Agricultural Works, Warehouse and Seed Store, by

EMERY BROTHERS,
52 State Street, Albany.

June 21—w&m1t.

Davy's Devon Herd Book.

NOW READY, a *large supply* of both first and second volumes, bound in one book, and containing all the subjects connected with the Devon Records, of both England and America, up to the present time. Also as a frontispiece, a beautiful engraving of the celebrated picture known as the "*Quarity Testimonial*," which is a full length portrait of Mr. Francis Quarily, now living at 91 years of age. It is also illustrated with two animals, prize winners in England. Price $1.00, and can be had by enclosing the amount to B. P. JOHNSON, Cor. Sec'y of N. Y. State Ag. Society, Albany, N. Y.; LUTHER TUCKER, Ed. of *Country Gent.*, Albany, N. Y.; Sanford Howard, Boston, Mass.; D. D. T. Moore, Ed. of "*W. G. & S. Register*," Rochester, N. Y.; A. B. Allen, Ed. of "*American Agst.*," N. Y.; Samuel Sands, Ed. of "*American Farmer*," Baltimore, Maryland; A. M. Spangler, Ed. of "*Progressive Farmer*," Philadelphia, Pa.; Lee & Redmond, Eds. of "*Southern Cultivator*," Augusta, Geo.; and Wm. McDougall, Ed. of "*Canadian Agst.*" Toronto, Canada.

It gives me pleasure to state that Mr. Davy has solicited Mr. S. HOWARD, of *The Boston Cultivator*, to collect pedigrees and illustrations in this country for the 3d Vol., and has authorized Mr. H. to obtain information as to any and all mistakes which may have been made as to the recording of American animals in Davy's second Vol., and such corrections will be made in the third Vol. The plan proposed is that a copy of all the pedigrees and illustrations collected by Mr. Howard as the editor in America, shall be forwarded to Mr. Davy, and a copy of those collected by Mr. Davy will be sent to Mr. Howard. The whole matter will be published in America for our use, and also in England for their use, by which means an American and English Devon Herd Book will be united, and the price reasonable, as the expense of English printing and duties will be saved. This concert of action has been brought about by Mr. Davy's good feeling and liberality towards this country, and I am only the instrument through which Mr. Davy acts, and from this time forth Mr. Howard will receive all communications on the subject, as will appear by reference to his advertisement.

All Editors who will give the above 3 insertions, will receive a copy of the 1st, 2d and 3d Volumes.

L. G. MORRIS.
Am. Ag't for J. Tanner Davy's Devon Herd Book.

June 7—w3tm1t

IMPORTED "MONARCH."

BY PRIAM, out of Delphine by Whisker, will stand at L. G. Morris' Herdsdale Farm, 1½ mile from Scarsdale Depot, and 24 miles from New-York by Harlem Railroad. Terms: $20 the season for mares not thorough-bred, and $50 for thorough-breds. Pasturage, $3 per month. Accidents and escapes at the risk of the owner. All business connected with the horse, to be addressed to "MONARCH'S GROOM, Scarsdale P. O., Westchester Co., N. Y." A portrait taken from life, with performances on the turf, full pedigree, &c. &c., will be forwarded by mail, by addressing

L. G. MORRIS,
Fordham, Westchester Co., N. Y.

March 22

IMPORTED "BALCO," (9918.)

THIS celebrated prize Short Horn Bull, bred by Thomas Bates, Esq., Kirkleavington, England, imported and selected by Col. Lewis G. Morris, the best breeder and importer of stock in the United State, will serve a limited number of cows on the following terms, viz., $20 the season for cows not thorough bred, and $35 the season for thorough-bred. The committee on Short Horns, at the fair of the New York State Agricultural Society, held at Saratoga Springs in 1853, speaking of this bull, says, "Your committee feel it their duty to recommend for special notice the imported bull "Balco," belonging to Messrs. Morris and Becar, an animal destined to prove a valuable addition to the Short Horns of the United States, and place that valuable breed on equal footing with any which the world can produce." "Balco" will be found at the farm of the subscriber, "Wilkinvilla," near Montgomery, Orange Co., N. Y., eleven miles from Newburgh.

Also the Young Bull "Corn Planter" will serve a limited number of cows on the following terms, viz., $10 for cows not thorough-bred, and $25 for thorough-bred. "Corn Planter" was bred by Col. J. M Sherwood, Auburn, N. Y. Pasturage for those who wish it, at a moderate charge. All accidents and escapes at owner's risk.

Pedigrees of "Balco" and "Corn Planter," with portraits from life, furnished on application to me.

JAMES W. WILKIN,
Wilkinvilla, near Montgomery,
Orange Co., N. Y.

May 8—w8tm2t

The Excelsior Horse Power

HAS been very thoroughly tested in the presence of a number of mechanics and others, and pronounced a *very superior machine.* The fastenings or couplings for the Band wheel, &c., cannot possibly get loose, as is often the case with many other Powers, and it is warranted to do all the work any reasonable person can require of a Horse Power, *or the machine can be returned at the manufacturer's expense.*

This machine is manufactured exclusively by

RICH'D H. PEASE,

at the Excelsior Ag. Works, Warehouse and Seed Store, Old Stand, 369 & 371 Broadway, Albany, N. Y.

June 7—w4tm1t

Horse Powers—Threshers—Eagle Fan Mills.

ALLEN'S IMPROVED HORSE POWER. It runs uncommonly easy, and does not require more than half the elevation at the forward end, of other Powers.

THRESHERS, both over and under-shot, made in a superior manner.

EAGLE FAN MILLS, *the best and cheapest Grain and Seed Separator made.* The superiority of this Fan Mill consists,

First—In cleaning without a screen, by separating the impurities, such as chess, cockle, smut, &c., by the blast alone, consequently saving the loss of the small sound kernels of wheat which must go through a screen.

Second—An arrangement by which a part of the sound and perfect grains are separated from the rest for seeding, leaving the balance in a good marketable condition, so that the farmer need sow only such grain as contains the germ of growth.

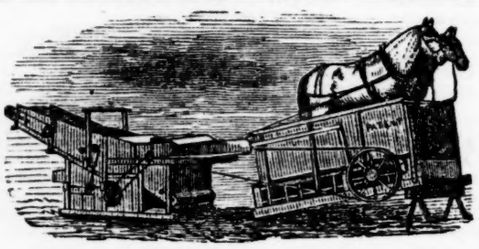
Third—Smaller seed, such as grass and clover seed, are cleaned in the most perfect manner.

Fourth—Fans built on this plan will clean grain both in the first and second cleaning, faster and better than any others now in use.

Fifth—The cheapness and durability of its construction.

R. L. ALLEN, 189 and 191 Water-st., New-York.

May 17—w,24,26.28.30—m2t



G. WESTINGHOUSE & CO.

CONTINUE the manufacture of Threshing Machines Clover Cleaners, Wood Saws, &c., at Central Bridge Schoharie Co., N. Y.

We have improved our Thresher and Cleaner, (and for which we have obtained a Patent last year,) which works superior to anything of the kind in use, and has given entire satisfaction where used.

Our Horse-Power, Thresher and Separator, has the name of being the best machine in use, where known. Those wanting machines will be more likely to get them when wanted by ordering them early, as we shall not be able to make more than 100 of them this season. Last year we did not supply the demand by a large number, being unable to get them out in time.

Further information given on application by mail otherwise.

G. WESTINGHOUSE & CO.
Central Bridge, N. Y.

May 3—w22,24,26,28,30,32—m3t

A New and Improved

PATENT SCYTHE-SNATH,

MADE from *wrought iron*, light, firm and durable, and pronounced by very many who have used them for two seasons past, superior to any other Snath.

Manufactured only by LAMSON, GOODNOW & CO., (long known as makers of Lamson's Patent Wood Snaths,) and for sale at their Warehouse, No. 7 Gold-St., New-York, and by the Hardware and Agricultural trade generally, throughout the country. May 3—w1tm2t*

Agricultural Books,

For sale at the office of the Country Gentleman.

TA-FEU,

A NEW FERTILIZER, manufactured from night-soil, which, after being screened, dried and disinfected, is raised to a certain standard by the addition of salts of ammonia. It is warranted to be composed of nothing but night-soil and the aforesaid salts of ammonia, as the chemicals used for disinfection add neither bulk nor weight to the composition. It is the intention of the LODI MANUFACTURING CO., who alone possess the right to this discovery, to make an article which can always be relied upon as pure and of a certain strength. It will be sold wholesale and retail, at $35 per ton of 2000 lbs., without charge for barrels or cartage, instead of which no tare will be allowed. A circular, containing testimonials of those who used an article something like, but much inferior in strength, made by us last season, will be forwarded by mail on application to the subscribers or their agents. Address

THE LODI MANUFACTURING COMPANY
No. 60 Courtland street,
May 31—w&m4m New York.

Only $48 per Ton.

NO. 1 PERUVIAN GUANO

CAN now be had at the

North River Agricultural Warehouse

at the low price of $48 per ton. For the benefit of farmers wishing to purchase this valuable manure, we would say that we do not keep the prepared, or No. 2 Guano. There will none but No. 1 Peruvian be found at our Warehouse.

GRIFFING & BRO.,
May 24—w8tm3t 60 Cortland-st., New-York.

Appleton & Alderson's Drain Tile Works,

Corner of Lydius and Snipe streets, Albany, near Mr. Wilson's Nursery.

HORSE SHOE TILE, 14 INCHES LONG.

PIECES.

4½ inches calibre, ...$18 per 1000.
3½ inches calibre, ... 15 per 1000.
2½ inches calibre, ... 12 per 1000.

SOLE TILE, 14 INCHES LONG.

PIECES.

4 inches calibre, at .....$40 per 1000.
3 inches calibre, at ..... 18 per 1000.
2 inches calibre, at ..... 12 per 1000.

THE subscribers having enlarged their works, are now prepared to furnish Drain Tile of the various patterns and prices. Also Large Tile for small streams and drains about dwellings, &c., at $4, $6, and $8 per 100 pieces. We warrant our Tile to be perfectly sound, and to fit good at the joints, so as to admit water and keep out the dirt. The Tile have a larger calibre than any other of American manufacture for the same prices; they are also more than 14 inches in length—1000 pieces will lay 72 rods.

Tile delivered at the docks and railroads free of cartage. Specimens can be seen at L. & M. MERCHANT'S, 71 Quay-st., Albany, near the Steamboat landing.

Full directions for laying Tile will be sent free to those addressing the subscribers.

We only need say that Appleton & Alderson obtained the first prizes for Tile at the Albany County, and N. Y. State Fairs. Practical drainers furnished if required.

Orders from all parts, will be thankfully received and promptly attended to.

Address APPLETON & ALDERSON,
195 Washington-st., Albany, N. Y.

May 31—weow&m5m

Devon Cows,

HEIFERS, and Bull Calves—pure blood—for sale by
Feb. 1—m1y. B. V. FRENCH, Braintree, Mass.

DISSOLUTION.

THE co-partnership heretofore existing between the subscribers, under the name and firm of H. BLANCHARD & Co, is this day dissolved by mutual consent. Either party will sign in liquidation. HOMER BLANCHARD.
T. M. BURT.

Kinderhook, March 31, 1855.

NOTE.—All communications relating to the business of the old firm of H. BLANCHARD & Co., should be directed to Kinderhook, N. Y.

CO-PARTNERSHIP.

The subscribers have formed a co-partnership under the name and firm of H. BLANCHARD & Co. for the transaction of a Commission Wool business in the city of Hartford, Conn.

HOMER BLANCHARD, Kinderhook.
LAWSON C. IVES, Hartford.

Hartford, March 31, 1855.

CIRCULAR.

It is now ten years since the subscriber started the WOOL DEPOT system, it being the first attempt at a close classification of Wool in the fleece in this country; four years alone, and six years in company with Mr. T. M. BURT, who now retires from the business. His experience but confirms the position which was taken by the friends of this enterprise in its infancy; that there is no other system yet devised, which is so appropriate to meet the wants and necessities of the wool-grower, dealer or manufacturer, as the close classification of Wool in the fleece. The manufacturer can obtain the grade he wants, and the seller of Wool the relative value of each grade, quality and condition considered; thus affording facilities and encouragement for improvement.

The present location is not deemed by himself, and many of the friends and patrons of the Depot system, as favorable for effecting ready and quick sales as a more central one, easy of access, and in the immediate vicinity of manufacturing establishments. He has therefore formed a copartnership, as above stated, and will remove the Kinderhook Wool Depot business to the city of Hartford, Conn. There is annually manufactured within four hours' ride of that city, more than twelve millions pounds Wool; and within six hours' ride, more than one-half of all the wool worked by manufacturers in the United States.

The same system of classification will be continued as practiced at Kinderhook. Also the services of the same sorter retained. The same charges for receiving, sorting, storing and selling, viz: one and a half cents per pound and the insurance, when sales are made for cash as heretofore. In order to possess additional facilities for selling, sales will be made on time, when they can be more readily effected or better prices obtained, than for cash. In all such cases where time sales are made, the payment will be guaranteed, and the usual guarantee commission of two and a half per cent. on the amount of sales, will be charged additional.

Advances will be made in cash or by acceptances, as may be agreed upon. Sacks furnished to consigners by charging 25 cents each for their use.

Thankful for the liberal patronage and confidence bestowed, the subscriber respectfully solicits a continuation of past favors, and confidently hopes, and firmly believes, that he can better promote the interests of his consignors by a change of location, than by remaining where he has formerly been.

H. BLANCHARD.

NOTE.—After six years' experience in selling Wool at Kinderhook, I fully concur in the propriety of H. BLANCHARD's decision to change his location, and remove the Kinderhook Wool Depot business to the city of Hartford, believing that the interests of our former consignors will be promoted, by making more ready sales, and avoiding the delays consequent upon our location, and to a rigid adherence to the cash system.

T. M. BURT.

REFERENCES.

George Beach, Esq., President Phœnix Bank; H. A. Perkins, Esq., President Hartford Bank; Messrs. Day, Owen & Co., Merchants; Messrs. Day, Griswold & Co., Merchants; Messrs. Collins & Brothers, Merchants, Hartford, Conn. Messrs. Hacker, Lea & Co., Merchants, Philadelphia; Messrs. Freeland, Stuart & Co., Merchants, New-York; Dr. J. P. Beekman, President Bank Kinderhook, Kinderhook, N. Y. May 1—m3t

BLACK HAWK.

THE original VERMONT BLACK HAWK will serve a limited number of mares the coming season at $100 each.

Gentlemen wishing to secure the services of this horse, must send in their letters at once.

Good pasturing at 50 cents per week. All accidents and escapes at the risk of the owner. DAVID HILL,

March 1, 1855—m3t Bridport, Addison Co., Vt.

Hay Presses, Hay Presses.

DEDERICK'S PORTABLE PARALLEL LEVER HORIZONTAL AND VERTICAL HAY PRESSES.

THESE Presses are so constructed that they can be taken apart at the manufactory, and (by the printed directions accompanying each press) put together again in a couple of hours by any two farmers, without the aid of a mechanic. They are so conveniently portable that they can be moved from one field or farm to another, as a sleigh is moved, by a pair of horses or oxen, and for convenience and power of operation they are altogether unequalled. They are now being shipped to all parts of the country, and are in every instance giving the most decided satisfaction. With two men and a boy to attend the horse, one of these machines will bale from 6 to 8 tons of hay per day, according to the No. or size of the press. Prices, from $130 to $175. For circular, with full description, apply personally or by mail to the subscribers.

DEERING & DICKSON,
Premium Agricultural Works,
May 10—w&meowtf Albany, N. Y.

ENGLISH CATTLE,

Imported on commission by Messrs. THOS. BETTS BROS., Bishop's Stratford, Herts, England—81 Maiden Lane, New-York City.

BEING much the cheapest and the only way of obtaining Stock direct from the Breeder, which will give gentlemen an opportunity of obtaining the best stock, without having to pay an exorbitant price for them in America. The firm having had forty years' experience, they feel confident of giving satisfaction both as regards price and selecting the stock from the best herds in England.

Thorough-bred Horses,	Hampshire Sheep,
Short-Horned Cattle,	Cotswold, Leicester do
Devons, Herefords, Ayrshires,	Suffolk Pigs,
Alderney Cows from Islands	Essex, Berkshire do
of Alderney and Guernsey,	Merino Sheep from Spain,
Pure bred Southdown Sheep,	Mules, do do

Messrs. Betts Bros. have appointed one of the most experienced men in England entirely for purchasing Thorough Bred Horses. They have also an agent in Spain for purchasing mules, Merino Sheep, etc Messrs. Betts Bros. have purchased a valuable patent invention which will prevent accidents occurring to cattle across the Atlantic. They can now be safely imported any time during the year. The cattle will be insured from Liverpool to New-York when desired, by charging a small per centage.

A steamer will leave Liverpool with cattle about the first of every month. The stock will be delivered at New York about six weeks from the time the order is given in America.

Circulars containing all particulars, expenses to America, and the prices of Cattle in England, may be had by applying by post to Messrs. THOS. BETTS,
or, J. M. MILLER, Agent, 81 Maiden-lane
Jan. 4—1an—m1y. New York City.

FARM FOR SALE.

A FARM of One Hundred acres in MILO CENTER, Yates Co., N. Y. a short distance from the line of the Canandaigua and Elmira Rail Road. It is well watered by springs and a fine stream, easily cultivated—soil a fine gravelly loam, unsurpassed for either grain or grass, with exception of about 20 acres which is *choice* natural meadow land.

It has upon it a good *Dwelling House* and out Buildings—is in a good neighborhood, convenient to churches, school houses and stores, and is in every respect one of the most desirable locations in the state. For terms which will be made easy, apply to GASPER & Co., 41 Water St., New-York; Caleb Gasper, Esq., Marcellus, Onondaga Co., Geo Young, Esq., Milo Center, Elias Bently, Esq., Sandy Creek, Oswego Co., S. Booth, Esq., Branchport, Yates Co. Norman Seymour, Mechanicsville, Saratoga Co., N. Y., Judge Ellsworth, Pen Yan. March 1—mtf—

Farm Lands for Sale,

IN LOTS TO SUIT PURCHASERS.

OVER **2,000,000 OF ACRES** of Selected Prairie Farm Lands, belonging to the Illinois Central Railroad Company. The price will vary from $5 to 25, according to quality, location, &c. The purchase money may be payable in five equal installments, the first to come due in two years from date of contract, the others annually thereafter—giving six years to pay for the land, with a charge of only *Two per cent per annum interest.* The first two years' interest payable in advance. The Company's construction bonds received as cash. Apply to CHAS M. DUPUY, Jr.,
Land Agent Ill. Cen. R. R. Co.
March 15—m6t* No. 84 Lake St., Chicago, Ill.

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DE BURG'S NO. 1

Ammoniated Super-Phosphate of Lime.

THE above valuable compound is warranted pure and genuine. The manufacturing department is under the personal direction of the subscriber, and will have studious attention as to his preparation at all times being uniform in its component parts. Many experiments during the past year, with the above brand, in equal quantity with Peruvian Guano and other concentrated Fertilizers, scrupulously testing its value as compared with the latter, by various State Farms, public Agricultural Committees, &c., have been made, showing a preference for it as a manure, both as to early inducement and prolificness of growth. Pamphlets will be sent on application to the subscriber, containing full directions for use, &c.

C. B. DE BURG,
Sole Proprietor and Manufacturer,
June 14—w&mtf. Williamsburg, L. I.

DOMESTIC ANIMALS

AT PRIVATE SALE.

L. G. MORRIS' ILLUSTRATED CATALOGUE, with prices attached, of Short Horned and Devon Bulls and Bull Calves, a few Horses, South Down Rams, Berkshire, Suffolk and Essex Swine, will be forwarded by mail (if desired.) by addressing L. G. MORRIS, Fordham, Westchester Co., N. Y., or N. J. BECAR, 187 Broadway, New York. It also contains portrait, pedigree, and performances on the turf of the celebrated horse "Monarch," standing this season at the Herdsdale Farm. May 3, 1855—w&mtf

RURAL PUBLICATIONS.

THE attention of all persons interested in rural pursuits, is invited to the following publications:

THE COUNTRY GENTLEMAN—a Weekly Journal for *the Farm, the Garden and the Fireside*—forming yearly two large and beautiful quarto volumes of 416 pages each. Price, $2 00 a year. This is, beyond question, the best agricultural journal published in this country. Specimens sent to all applicants.

THE CULTIVATOR—a Monthly Journal for the Farmer and the Horticulturist, beautifully illustrated, and forming an annual volume of nearly 400 pages, at 50 cents a year.

THE ILLUSTRATED ANNUAL REGISTFR of RURAL AFFAIRS for 1855, embellished with more than *One Hundred Engravings*,—1 vol. 12 mo. 144 pp.—price, 25 cents in paper covers—bound, 50 cents—*sent prepaid by mail.*

RELATIONS OF CHEMISTRY TO AGRICULTURE, and the Agricultural Experiments of Mr. J. B. Lawes, a new work by Prof LIEBIG, just published, price 25 cents—sent prepaid by mail.

☞ Specimens and Prospectuses sent to those disposed to act as Agents. Address the publisher,

LUTHER TUCKER, *Albany, N. Y.*

THORO'-BRED SHORT HORNS.

THE herd of the subscriber being now larger than it is desirable to retain, on account of the size of his farm, he wishes to dispose of five females, varying in age from three months, to nine years, all highly tinctured with Bates blood, and in other respects with the most desirable crosses for milk giving, as well as butter and beef making. Also five very fine young Bulls, two of which were got by the celebrated prize Bates Bull Meteor, (11811,) two by his own valuable imported bull Lord Ducie, and one by Eclipse 2d, also son of Meteor. They vary in age from six months to one year, and are out of some of the best cows of his herd, who are equal to any in this country. DR. HERMAN WENDELL.
June 14—w&mtf

Forbush's Improved

MOWER & REAPING MACHINE

IT has been in use for the last three seasons, and is considered the best Combined Machine in use. For sale by the American Mowing and Reaping Machine Company's Agent,

D. C. MORGAN,
June 7—w6tm1t 34 Cliff-st., cor. of Fulton, New-York.

FORBUSH'S IMPROVED

Mowing and Reaping Machine.

THIS valuable Harvester can now be had at the *NORTH RIVER AGRICULTURAL WAREHOUSE.*

Persons wishing circulars with testimonials, can have them forwarded by addressing GRIFFING & BRO.,
60 Cortland-st., New-York.

☞ The above Machine is warranted to cut from 10 to 15 acres of grass or grain per day. May 24—w8tm2t

For Sale Very Cheap,

A BOLT CUTTER AND TENONING MACHINE, both in excellent order. Inquire of

RICH'D H. PEASE,
Excelsior Agricultural Warehouse and Seed Store,
Old Stand, 369 & 371 Broadway, Albany, N. Y.
June 7—w4tm1t

THOMAS GOULD,

BREEDER of Durham and Devon Cattle, Leicester Sheep, Suffolk Swine, Madagascar or Lop-eared Rabbits, English Ferrets, Guinea Pigs, Choice and Fancy Poultry.
Jan. 18—w&mtf Aurora, Cayuga Co., N. Y.

Improved Superphosphate of Lime.

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